Polis / Rapid Urbanisation and the Rise of Informal Settlements

Editorial / Reto Bürgin

Reto Bürgin is an urban geographer and urban sociologist. He is a passionate urban researcher and editor of several books related to urban issues, such as urban planning, urban social movements, and urban resistance. He is a PhD student in economic geography at the Institute of Geography at the University of Bern and a research assistant at the ETH Wohnforum – ETH CASE at the ETH Zurich. He enjoys extensive city walks and is a passionate urban photographer.

The city I grew up in is a very small one. Basel. It is tiny compared to the big towns mentioned in this volume of *Polis*. Less than 200,000 people live there. But it is a city, and indeed *the* city for me. It is the place that makes my heart beat faster the closer I get and where my heart will always belong. But why am I talking about heart and city? Like a heart, a city has its own pulse, like every single one of the thousands of cities in the world. Some pulsate faster and others slower. With regard to Basel, the nexus of city and heart also has a further dimension for me. As an innocent student, Basel was the place where I began to dedicate myself wholeheartedly to the study of cities – in Switzerland and in the global arena.

As a geographer, I enjoy extensive city walks. Yet, it is more than just walking; we might more aptly call it "exploring". How can we better try to understand a city than by taking the time for a walk, to ponder our urban surroundings and to discover new phenomena in the urban jungle? Exploring new cities and their everyday life helps us better understand our own city. Observing and comparing help us get beyond our preconceptions – and this is important.

We can study different cities in different places and learn from their specific contexts. And this is exactly what this third volume of *Polis* tries to convey: it seeks to offer selective insights into processes of rapid urbanisation of pulsating cities on different continents. It is devoted to the issue of the housing shortage in the informal settlements of rapidly growing cities and is driven by the question of how to create and how to improve living space in these liminal urban spaces. This volume has a focus on informal housing, housing construction, and ecological, economic, and social sustainability. Special attention will also be paid to the material conditions of these housing estates and to the collective supply systems (transportation, water, electricity), which play a decisive role in the development of informal settlements alongside different (social) regulatory systems or arbitrary legal conceptions.

Our cities are growing rapidly and seemingly unstoppably, mostly in Africa and Asia. Within a few years, small fishing and farming villages have developed into large metropolitan areas, whose names most of us have never heard before. This has caused a wealth of new challenges that these urban environments are now facing. Land is becoming increasingly expensive, affordable living space is scarce, housing prices are on the rise, and the construction of housing often cannot keep up with the speed of demographic change. In response to this, numerous informal settlements are being established at the outskirts of these growing cities, where a rural depopulation is in full swing.

In the search for work, because of hazards, or with the hope for a better life, innumerable people are leaving their homes and are moving into cities, but the housing supply of the arrival city may not be prepared for this. The pursuit of happiness may be a long journey and a never-ending one for many. Access to jobs and adequate housing is not granted to everyone, and increasing social inequality fundamentally changes the ways in which people are experiencing everyday urban life. Slums, mainly located at the outskirts of cities, are growing rapidly, and urban growth is expanding more and more into former rural areas. As a consequence, more land is clutched by the city. But does expansion resolve the pent-up problems, and does it reflate the search for a satisfied life?

Recently, informal settlements such as barrack towns or slums have been bursting at the seams and have come to be the first points of contact for countless migrants. These dwellings are swiftly set up at the outskirts of cities and, more often than not, without the influence of state planning or the know-how of professional planners. The inhabitants themselves take their fate into their own hands and build their own four walls rather than waiting for a top-down housing construction initiative by the government.

Today, more than one seventh of the world's population is living in such informal settlements, sometimes beyond the state's interests, control, and influence. It is now up to all of us to better understand the conditions of rapid urbanisation and to create opportunities for decent, affordable, and adequate housing. It doesn't matter if we are architects, sociologists, geographers, developers, engineers, or urban dwellers – new strategies can only become fruitful if ideas and desires can be reconciled with reality.

This volume of *Polis* approaches the issues involved in informal housing in fast-growing cities from a variety of angles. The articles in this volume are intended to describe geographically distinct cases on different continents of our world. In doing so, importance is being placed both on a broad and general understanding of the phenomenon of informal settlements in rapidly growing cities as well as on case studies of specific instantiations of this phenomenon. As a consequence, it will become possible to illuminate similarities and differences as well as regionally distinct issues across various cultural contexts. Will you find them by reading the articles?

A large proportion of the authors in this volume are architects and/or development specialists. Some of them are among the world's leading experts and practitioners, who try to improve housing and the everyday life of the poor with their tireless commitment. Others are young architectural researchers, doctoral students, and aspiring architects. The authors in this volume had the opportunity to freely choose the form of their contributions. Thus, some of the articles are academic in nature while others take the form of opinion pieces or project descriptions or ponder the personal role of a young architect in this emerging field.
This volume is inspired by the book *Metropolis Nonformal* (2015) by Christian Werthmann and Jessica Bridger and by the *No Cost Housing Conference*, which took place in summer 2016, organised by the ETH Wohnforum – ETH CASE and Urban-Think Tank of ETH Zurich. During my work as the curator of this large international conference, I had the possibility to dive deeply into the topic of low-cost, affordable, and adequate housing from an architectural perspective, even though I am not an architect myself. But it has aroused my interest.

It was a great pleasure and honour for me to be the editor of this third volume of *Polis*. I would like to thank Christa Ziegler, Georg Rutishauser of edition fink publishers, and, of course, all the authors for the fruitful collaboration that has resulted in this book.

During the process of editing this volume, I have rediscovered the "explorer" in me. Reading the contributions to this volume has reminded me of the exciting life of the curious and highly passionate researcher of cities, who explores a new and unknown part of the cities of this world. I hope you can also discover your own, inner curious urban traveller by reading the following lines, by breaking up the dualism of formal and informal.

This edition could be realised thanks to the generous support of Kulturstiftung des Kantons Thurgau.

kulturstiftung
des kantons thurgau

Christa Ziegler / Polis

The illustrated volume «Polis – Cities in Images» is the result of a photographic long-term study. Over several years the photographer Christa Ziegler toured megacities, primarily in Africa, Asia, and South America.
Ziegler's interest pertains to direct contemplations: How does the economic and social strain, which cities counterbalance today, influence living conditions locally? What does the urban space that accommodates a steadily increasing global population look like?
On foot and by public transport, the photographer also makes her way to areas where informal buildings devolve into wasteland or where city planning is hindered by desert, sea, or arterial roads. From Accra to Chandigarh, from Mexico City to Mumbai, from Detroit to Xiamen – the composed, black-and-white aesthetic of analogue photography reveals the premise of a commensurable account of similarities and differences.

Christa Ziegler
Polis – Bilder von Städten / Cities in Images
edition fink, Zurich
ISBN 978-3-03746-174-7

The pictorial atlas deliberately eschews a theoretical introduction or critical commentary. The phenomenological exploration of the boom of cities is rather a basis for examination in a smaller, more expeditious journalistic format. Thus authors from different countries and specialised perspectives were brought together in a first journal.

Christa Ziegler
Polis – Essays zur Stadt / Talking about Cities
Edited by Isabel Zürcher
Essays by Khaled Al-Khamissi, Hilan Bensusan, Kaiwan Mehta, Peter Suter, Monica Udler Cromberg, and Isabel Zürcher; conversation between Al Imfeld and Mandu dos Santos Pinto
edition fink, Zurich
ISBN 978-3-03746-175-4

A second journal has been edited by Khaled Al-Khamissi and is dedicated to the Egyptian capital.

Christa Ziegler
Polis – What about Cairo?
Edited by Khaled Al-Khamissi
Essays by May Al-Ebrashi, Kareem Ibrahim, Amr Abdel Kawi, Khaled Al-Khamissi, Hoda Al-Sadda, Mohammed El-Shahed
edition fink, Zurich
ISBN 978-3-03746-198-3

Editor: Reto Bürgin
Concept, coordination: Christa Ziegler, Isabel Zürcher, Georg Rutishauser
Essays: Alfredo Brillembourg, Hubert Klumpner, and Alexis Kalagas, Varsha Bhagat-Ganguly, Eefje Hendriks, Fabienne Hoelzel, Charlotte Malterre-Barthes, Christiane Rudić, Kirtee Shah, Jin Zhu
Correction: Wendy Brouwer
Typesetting, design: Annamaria Kozma, Sonja Zagermann, Georg Rutishauser
Printing: Druckerei Konstanz GmbH, Konstanz

ISBN 978-3-03746-214-0

Infrastructure, networks, and alliances: Approaches in urban slum regeneration in West Africa. Case study: Lagos (Nigeria)/

Fabienne Hoelzel

In the light of the enormous challenge that urbanisation processes in West Africa represent – urban growth driven by poverty (not opportunity), a big and growing number of settlements without infrastructure (sanitation, access to safe water, health services, affordable housing, and so on) against the backdrop of very limited funding, and overwhelmed governments at all governance levels – there is a need for fast, effective, and affordable planning approaches to improve the living conditions of the residents in urban slums, the predominant local urban pattern. These solutions need to be poverty-focused – most people live on less than US$3 a day – and sensitive to the needs, culture, and social logic of the respective communities in order to be effective. Consequently, the interaction of the involved stakeholders is key in all project phases (design/planning, implementation, and operation/maintenance). One of the key stakeholders is obviously the community itself. In the context of the mentioned settlements, precisely designed community-based or -led approaches appear to work best: the "problem" – urban informal settlement and slum dwellers – does not only become part of the solution but actually turns into the solution itself. Viewed like this, urbanisation and urban growth in the West African context is an opportunity, not a problem. The argument is that by activating the "micro" community and civil society level through capacity-building self-help mechanisms, the failure or shortcoming of the tasks of the state can be tackled and eventually "inspire" governments to improve their policies, measures, and strategies. Decentralised, co-managed "entities" or "hubs" in poor informal settlements can build new networks or tap into existing networks, literally and physically. These community-based "hubs" do not only provide collective services, such as waste management, renewable electricity, or basic medical supply; they also serve as an incubator of social change as the community learns to manage their neighbourhood and establish local and inclusive governance. The architectural and urban design of such social infrastructure matters: it is the structural embodiment of local governance, a place of social change and social business. This article explores how informality in a poor urban context can turn into strength by tapping into self-organisation and creating new forms of local governance and local businesses, eventually changing urban politics in bottom-up approaches and creating strong civil society structures – not least by reinterpreting the role of architecture and urban design. Case studies are low-income communities in Lagos, Nigeria, that, often threatened by forced eviction, have been undergoing a community-led process during which a series of upgrading strategies are under development, among them the Makoko-Iwaya Waterfront, where FABULOUS URBAN, an urban design, research, and planning agency based in Zurich and Lagos, has been involved in the Makoko-Iwaya Regeneration Plan as well as the design and the ongoing implementation of the Makoko Neighborhood Hotspot.

Fabienne Hoelzel is professor of urban design at the Stuttgart State Academy of Art and Design and the founding director of FABULOUS URBAN, a design, research, and planning agency for less developed regions, after working for one of Latin America's largest slum-upgrading programmes as the head of the urban design and planning team at the Social Housing and Urban Development Authority of São Paulo, Brazil, which was awarded the UN Habitat Scroll of Honour in 2012 for its pioneering work. From 2008 to 2010 and from 2013 to 2017, Fabienne held a research and teaching position at the Institute of Urban Design at the ETH Zurich. She lectures and writes on a regular basis. FABULOUS URBAN has currently evolved into a series of strategic slum-upgrading projects in Lagos, Nigeria, and has co-developed the Makoko Regeneration Plan in Lagos, Nigeria, which was shortlisted for the 2014 Fuller Challenge. FABULOUS URBAN recently implemented phases one and two of the pilot Makoko Neighborhood Hotspot. Phase three, the implementation of biogas-linked toilets, will be concluded in 2017.

Urban West Africa

There is hardly a doubt that West African cities are facing a serious urban crisis, rooted in a hybrid of reasons such as large and growing populations, urban sprawl, limited financial means, and increasingly environmental issues. According to recent democratic figures, urban growth in Sub-Saharan Africa will continue as the high fertility rates of 5 and more are not dropping as fast as expected (The Economist 2017). Nigeria has currently a fertility rate of 5.6, and according to the UN, the growth of the world population is expected to be concentrated in nine countries, among them Nigeria (World Bank 2017).

Previous urbanisation patterns made in nineteenth-century Europe that experienced a positive correlation between economic prosperity and demographic change do not apply to the West African context. Here, urbanisation is mainly driven by poverty not economic opportunity, and it is almost equal with informalisation. Consequently, this leads to the staggering conditions in which most people are born in, or migrate to, urban slum settlements that have no infrastructure whatsoever (Chenal 2014: 8). The development pattern in West Africa is sometimes described as "urban involution", characterised by a vast expansion in combination with economic decline (Gandy 2006: 247–248).

Recent globalisation processes produced winners and losers, wherein among the greatest losers of this development are the urban poor in West Africa (Milanovic 2016: 11). Additionally, there exists the severe problem of dishonest capital outflow from West African countries, resulting in a loss of tax revenue (Günther 2016). Governments in many West African countries exercise weak control over the activities of the public administration, and corruption is a part of everyday life, manifested in nepotism in obtaining career positions or government contracts. Often, bribes are the only way to speed up the overwhelming bureaucracy – for example, to obtain a building permit (Pacione 2005: 588–589). As a result, many urban West Africans do and will live in slums. Drastically formulated, urban slums have become the development model of the West African city (Chenal 2014: 8–9). Today, Sub-Saharan Africa has a slum population of 199.5 million (UN-Habitat 2016). This is mainly a huge challenge in a context where those living in informal settlements are at best ignored and at worst bulldozed (D'Cruz/Cadornigara/Satherthwaite 2016: 40). In some cities, up to 80 per cent of the population live in slums (ibid.). According to the UN definition, the main five characteristics defining a slum are (UN-Habitat 2016):

- Inadequate access to safe water
- Inadequate access to sanitation and infrastructure
- Poor structural quality of housing
- Overcrowding
- Insecure residential status

As West African cities grow and economic decline continues, the provision of urban infrastructure and services remain unsolved. Despite heavy investments, loans, and grants from the World Bank in recent decades, the West African city develops primarily via its informal fringes (Chenal 2014: 9). So far, there are no solutions to relatively simple problems, such as the affordable and sustainable provision of clean drinking water (Günther 2016) (175 million people in the West and Central African region lack access to safe drinking water; Njoh 2012: 94) or the provision of affordable and sustainable sanitation. In the West and Central African region alone, 224 million people defecate in the open, increasing from 188 million since 1990 (ibid.). The applied approaches do not seem to respond to the actual needs. Already in 1983, the German development planner Otto Koenigsberger wrote that Lagos as an example of an "unplanned self-help city" would work moderately well at the neighbourhood level but, "in spite of liberal investment in urban motorways, fails to function efficiently as an urban system" (Koenigsberger 1983: 49–55).

In 2006, Francisco Bolaji Abosede, the then commissioner for town planning and urbanisation at the Lagos State Government administration, was quoted that "by 2015" Lagos will be one of the largest cities in the world but with less infrastructure "than any of the world's other largest cities"

Makoko Neighborhood Hotspot (Visualization Fabulous Urban, 2014)

(Hoelzel 2016b). The fact that the West African city is primarily defined in terms of "lack" at all (Chenal 2014: 1) is a problem, as it is reflected in the perception of local politicians and civil servants on slums, which are perceived as an obstacle to modernisation and development. This argument is often used to get rid of them as they present a poor image of the city and prevent investments. It further leads to very negative (and usually inaccurate) views about informal settlements and their residents, wanting them to move back to the countryside while neglecting the fact that most of them are long-term citizens and that today most Africans are born urban (ibid.). The twisted and distorted perspective on slum dwellers also leads to the assumption that these people are mostly unemployed, when much of the city economy depends on the work they do and the tasks they take on (Fox 2011: 60–81). In Lagos, informal services get increasingly banned, leading to new problems as the poor lose their income sources or run the danger of prosecution (Heinrich Böll Stiftung/Fabulous Urban 2016). In contrast, contemporary urban theorists suggest looking at the urban condition of West African cities – and at the one of Lagos in particular – not as an anomalous problem (solvable or not) but rather as a "fundamental dimension to the global experience of urbanization" (Chenal 2014: 8; Gandy 2006: 250). However, even if we accept the latter perspective, the urban activist and human rights lawyer Felix Morka (2007) sums it up: "Although Lagos is one of the fastest growing cities in the world, it is, unquestionably, one of the least studied, understood and planned for." Positively formulated, in the words of Matthew Gandy, "a focus on a city like Lagos has the potential to illuminate not just a peculiarly African experience but also raise wider questions about the nature of modernity, urban governance, and the interactions between global flows and the material conditions of actually existing cities in the global South" (Gandy 2006: 250).

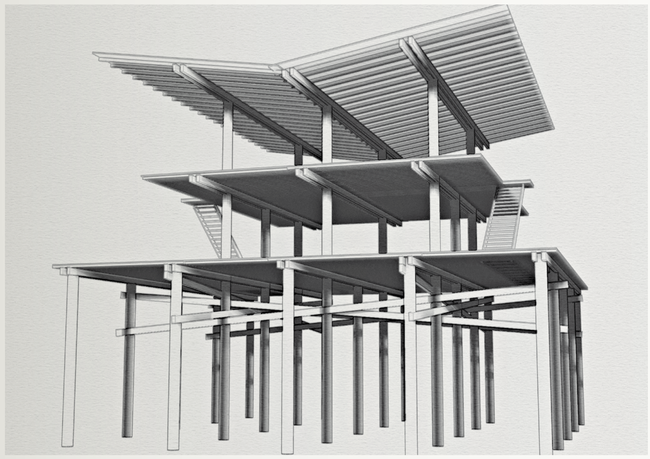
Urban development in Lagos

Today in Lagos, the majority of the residents, the urban poor (65.8 per cent), live in slums (according to the above-mentioned UN criteria and databases), 53.47 per cent live on less than US$1.90/day and 76.46 per cent on less than US$3.10/day, respectively (Our World in Data 2017). Whereas the past and current state government tends to view these settlements and their residents mostly as an obstacle on the way to the aspired status as "Africa's model megacity and global economic and financial hub" (Lawanson 2016: 217–220), other voices, mostly urban researchers, activists, and theorists, see the cause for the proliferation of urban slums in Lagos directly or indirectly as the result of the past – colonial and postcolonial – and very current shortcomings in inappropriate policies and planning approaches. The British, French, and Portuguese established from the sixteenth century onwards, in several stages of colonial urbanisation, some of the fort settlements in West Africa, including in Lagos, Dakar, and Accra, that became the primate cities of the twentieth century (Pacione 2005: 453–454). Under colonial rule, these primate cities, often capital cities, have frequently been the subject of grand master planning, guided by ideas of urban modernism and based on assumptions of modernisation theory[1] that – in a matter of time – African countries would economically and culturally "catch up" with the West and produce similar urban lifestyles like American or European households (Watson 2009: 151–193). Most of these blueprint and layout plans, usually understood as comprehensive, long-term strategies and representing an ideal end-state, had serious gaps between the initial vision and the actual results that led in many regions in Asia, Africa, or Latin America to spatial segregation, social exclusion, and excessive mobility needs, together with poor regard for the local potential (ibid.). Along this argumentation, many scholars would see the proliferation of urban slums in Nigeria as largely reflective of a colonial legacy, bequeathing "segregated cities with the aid of urban planning instruments", such as the Nigerian Town and Country Planning Ordinance No 4 of 1946 (similar to the 1936 British Town and Country Planning Law), that instituted planned government reservation areas for the elite and colonial authorities, growing alongside unplanned informal settlements (Lawanson 2016: 217–220). In 1983, the development planner Koenigsberger (1983: 49–55) wrote about Lagos: "As cities have grown without overall plan and structure, the cost of making them function efficiently is beyond the reach of even the wealthiest communities. […] Lagos is also typical insofar as the planning profession was allowed only minimal participation in the urban growth process, but is now blamed for the outcome."

In the 1970s, the ambitious and "extraordinary" (Gandy 2006: 8) UN-sponsored Lagos Master Plan (1980–2000) was developed, addressing various problems and challenges, such as the provision of housing and the creation and expansion of economic activity centres as well as the identification and even upgrading of major informal settlements or slums (Morka 2007: 4). The plan failed – in 2000, when the plan expired, only 10 per cent of the aspired housing units were delivered (ibid.) – and was the last attempt to conceptualise Lagos's severe challenges in an integrated, strategic way and to implement strategies to accommodate the forecast population growth of 13 million people by 2000 (Gandy 2006: 8). The return to military rule from 1983 marked the retreat from policy discourse to the crisis management (ibid.) that dominates the official debate on urban development to date. Many of the newly implemented legal provisions and governmental actions portray Lagos as a city under emergency rule where citizens are in extreme disagreement with government institutions (Heinrich Böll Stiftung/Fabulous Urban 2016: 61–129). The intense social polarisation and spatial fragmentation caused by the political repression and the forced eviction of slum settlements during the military regime has led to a scenario in which many households in Lagos – poor and rich – attempted to provide their own infrastructure supply, be it water, power, or security services (Gandy 2006: 252), a situation that has not much changed to date as the Lagos State Government largely fails to provide functioning basic urban services (ibid.). Since 1998, after the military regime under Abacha and during which human rights were widely abused, a number of NGOs have started to become active in the politics of infrastructure provision in Lagos (ibid.: 253). Today, many, if not most of, the innovative responses to Lagos's pressing challenges in urban development come from NGOs and organisations of the civil society, but they're clearly not enough; they're especially not strong enough to stand up to the often cruel behaviour of the Lagos State Government towards the urban poor (Hoelzel 2016a).

The urban model of contemporary Lagos can be defined as a hybrid city (Pacione 2005: 471), compromising indigenous and alien elements in roughly equal proportions (ibid.), and the city can be described as a relatively open one with little physical spatial segregation (Fabulous Urban/Heinrich Böll Stiftung/NSIBIDI Institute 2016: 1–134) despite the mentioned colonial past and years of military regime. The biggest thread to its openness is a relatively new trend called "strategic planning" or "urban mega projects". In contemporary Lagos, it has become one of the key urban policies to "attach" Lagos to the global economy and to make it attractive for foreign direct investment (FDI) (Heinrich Böll Stiftung/Fabulous Urban 2016: 173–214). One such example (out of several) is the development of the giant Lekki Free Zone – legally a free-trade zone – in collaboration with Chinese planners and investors. The Lekki Free Zone was conceptualised as the "strategic implementation" of the bigger development vision of former Lagos State governors Bola Tinubu (1999–2007) and Babatunde Fashola (2007–2015) to attract FDI and consequently to turn Lagos into a model for African urbanisation inspired by Asian or Middle East success stories (Hoelzel 2016b). The Lekki development – which includes a new airport and a new deep-sea port – deprived the local fisher community of their livelihood whereas the newly "assigned" farming lands – some sort of "compensation" – already belonged to other communities. The severe conflict between the displaced people and the government led earlier in 2016 to the murder of the managing director of Lekki Worldwide Investment Limited (LWIL), the managing company (Heinrich Böll Stiftung/Fabulous Urban 2016: 173–215). However, Lekki Free Zone is part of a global trend. As a result of the economic liberalisation from the 1980s onwards and the emergence of a global economic system in which cities play again a key role for the accumulation of capital, market forces now largely influence urban form and land use (ibid.). This is being manifested in a global trend refraining from classic master planning and adopting a more flexible planning approach. The so-called strategic planning can be described as more "pragmatic, incremental and typically focused on 'getting things done'" (UN-Habitat 2013: 129). These more business-led "strategic urban plans" impose an entrepreneurial view of the city by promoting mostly economic prosperity and appear in oversized architectural designs and mega-developments (Watson 2014: 215–231). These initiatives typically favour the gentrification and privatisation of entire areas, and, at times, they lead to massive displacement in order to make room for these developments, mostly and often at the expense of the habitat and livelihoods of the poor (UN-Habitat 2013: 129). The Lagos State Government's current planning approach could be casually summarised with "you need to break some eggs to make an omelette", which is also rooted in the mentioned colonial and postcolonial history. In other words, the official government approach in many cases is "development first, human rights second" instead of respecting the human rights on the route to development (Heinrich Böll Stiftung/Fabulous Urban 2016: 15–59). Nevertheless, there have been attempts and programmes of government-led and World Bank-assisted slum regeneration. One such example is the case of Olaleye-Iponri, arguably the oldest formal urban regeneration project in a slum community in Lagos. The World Bank-supported regeneration-through-upgrading approach in two phases – 1984–1988 and 2000–2008 – was meant for the original residents. The applied regeneration-through-redevelopment approach though was obviously not based on the principles of integration and inclusion, as it was not meant to accommodate the slum residents but rather a new set of residents (who are in the upper-income category) (ibid.: 43–54). Since 1984, when the regeneration of Olaleye-Iponri began, the community has continued to be ranked among slum communities in Lagos, thirty-one

1 In the 1960s, modernisation theory, based on Walt Whitman Rostow's stages of growth, saw the development of Third World countries as an evolutionary process in which diffusions of economic and cultural innovation from the West would move less developed countries towards a more advanced stage. Major cities played a central role in this development model. Dependency theory, prominent in the 1970s and until the mid 1980s, explained the continued economic stagnation with many Third World countries with the hegemony of Western nations over the economic order, in which development and underdevelopment were different outcomes of the same process. Cities played again a central role in this model, creating centres and peripheries, mainly based on research in Latin America. World-systems theory, an extended version of dependency theory by Wallerstein in 1974, identified three types of national positions – North America and Europe, richer Third World countries, and a periphery of poor countries exploited as a result of their involvement in the global economy – and acknowledged the interdependence of economic and urban development across the globe. Additionally, world-systems theory recognised the need to employ a historical-structural perspective to interpret the contemporary urban geography of the Third World (Pacione 2005: 453–454).



Makoko Neighborhood Hotspot (construction principle Hermann Blumer, 2014)

years on. The same story is applicable to other slum communities in Lagos – such as Amukoko, Badia, Makoko, Oko-Baba, and Sari-Iganmu, among others (ibid.: 55–58). The Lagos Metropolitan Development and Governance Project (LMDGP) was a World Bank-assisted project approved on 6 July 2006 with commencement in 2007. The project was conceived to intervene in nine slum communities (Agege, Ajegunle, Amukoko, Badia, Bariga, Ilaje, Itire-Ijeshatedo, Iwaya, and Makoko) with focus on housing-supporting infrastructure, consisting of roads, health care, education, electricity, water, and sanitation. LMDGP was closed in 2013. As noted by the World Bank project assessment report, the performance of the project was unsatisfactory. During the implementation, safeguard measures to protect the beneficiaries, the urban poor, were ignored while water delivery and other projects failed to make considerable impact in the lives of the beneficiaries. Rather than bringing succour and bridging spatial inequality in the targeted communities, the project has led to a widening gap, to displacements, to forced evictions, to demolitions, and to the deaths of some beneficiaries (Heinrich Böll/Fabulous Urban 2016: 38–39). Just recently, in early 2016, the French Development Agency AFD announced the implementation of a US$100 million slum-upgrading programme in collaboration with the Lagos State Government (The Gazelle News 2017). At the time of printing, the set-up of the programme is still in the set-up-phase.

2 Own experience in Makoko, Lagos.
3 FABULOUS URBAN functions de-facto as an NGO even though it is registered as a normal architectural firm. For more information, go to http://www.fabulousurban.com.

Networks, alliances, and infrastructure

Today, contemporary planning practices are inevitably related to the state, its powers, resources, and regulations, whether or not they are carried out by private corporations, community organisations, or state planning departments. That is, community action groups call on the state to take action and are often directly or indirectly supported by the state's resources; developers and private firms equally required decisions from the state and receive benefits and exemptions from state subsidies and taxes (Huxley 2000: 369). Even though it is obvious that the civil society and its organisations cannot tackle all the problems alone and without the support of governmental institutions, it is also clear that in many countries of the global South, it may take many more decades until the political, constitutional, and institutional preconditions fulfil the requirements to embark on comprehensive and systematic approaches to systematically solve the issue of urban slums and urban poverty. Thus, in (urban) environments where the state and local governance structures are weak, the civil society needs to step in (Hoelzel 2016a: 2–10). The inability or unwillingness of the state opens rooms for new forms of management and collaboration between the affected persons – for example, slum dwellers, their representatives, national and international NGOs, foundations, possibly even multilateral organisations, and administrative services of the state. The latter tends to play an ambiguous role somewhere between a "wait-and-see" approach, and learning and retrieval (Blundo/Le Meur 2009: 15).[2] Hence, it is indispensable that the accountability of officially elected government bodies is claimed throughout the planning, implementation, and operation process. On the other hand, a strong community structure and one or several driving and committed persons throughout the entire process (planning, implementation, and operation) are just as imperative for the long-term success of community-based projects. Many of these small-scale interventions seem to fail due to an inappropriate governance structure during planning and construction, as it did not take into account the operational and maintenance phase. Thus, purely informal solutions, not involving public authorities at all, are hardly sustainable. They reinforce the informal status of the communities and continue to exclude the urban poor from formal decision-making processes. Just because a project or programme reflects community control, it does not automatically guarantee success (Guaraldo Choguill 1996: 431–444). The key to the sustainable success of so-called aided self-help concepts – mostly called and widely recognised as slum-upgrading, site-and-service schemes, or urban regeneration (as opposed to urban renewal) – seems to lie in the successful network and governance processes between self-organised communities (involving key leaders and "common" people), community-based organisations, NGOs, and/or (local) governments. Community-led or community-based approaches have the potential to deliver more flexible, more precise, more affordable, and consequently more effective solutions than pure and classic top-down approaches. Ideally, community-led or -based initiatives develop "demonstrating" projects to show local government what they can do, promote, or even manage in a partnership approach (D'Cruz et al. 2014).

Makoko Neighborhood Hotspot (Isi Etomi, 2016)

Small-scale and strategic design interventions

One such example is the Makoko Regeneration Plan, initiated by the community itself that is under an ongoing threat of forced eviction. Only recently, Governor Ambode confirmed that the state government intends to evict all waterfront communities, of which many have been there for decades (Amnesty International 2017). The Makoko Regeneration Plan was developed by a working group of local and international experts, presenting a mix of almost classic master planning as well as strategic and small interventions that can be implemented immediately (Fabulous Urban 2). In February 2014, the comprehensive neighbourhood plan was presented to the Lagos State Government and has since then been under evaluation. It was shortlisted as well for the 2014 Fuller Challenge (ibid.). As part of the plan, the Makoko Neighborhood Hotspot, a community centre and infrastructure hub, was implemented, and the Makoko Neighborhood Hotspot Multipurpose Cooperative Society Limited was founded and registered with the Lagos State Government Ministry of Commerce, Industries, and Cooperatives (ibid.). The Makoko Neighborhood Hotspot was designed as a technical and social infrastructure providing urban services. It is also supposed to work as a business incubator promoting renewable energy production and biogas-linked community toilets. Its purpose is to serve at large as a community empowerment tool and learning centre. In that sense, the Hotspot represents more of a concept than a project even though the architectural design aspect was carefully and ambitiously developed and is an example of a combined community and NGO-driven project approach.[3] Its conceptualisation and building phases confronted the poor and underserved Makoko communities with a series of tough and difficult decision-making processes. Budget constraints and other limitations finally led to a smaller Hotspot than initially projected. The design and planning phase started in mid 2013, resulting in the completion of the building in late 2015. The process was tedious due to the complicated community structure that is strong but includes many traditional rulers, the *baales*, in the decision-finding process. There is a lot of rivalry and disagreement under the *baales*. Quite often we couldn't proceed for months.

The most delicate and difficult step was to find and select an available piece of land that met the technical requirements, that was equally accessible from all the parts of the community, and to which all the *baales* would agree. Once we settled on the production of the piece of land, the construction under the full participation of the Makoko artisans could start. The Embassy of Switzerland to Nigeria in Abuja covered the building costs (Fabulous Urban 1).

After the completion of the structure and its inauguration in December 2015, the second phase of the project ended in September 2016 with the formation of the Makoko Neighborhood Hotspot Multipurpose Cooperative Society Limited, officially registered at the Lagos State Department of Cooperatives. It will serve as the operational and administrative body of the Hotspot with its twenty members and a seven-strong management committee, comprising positions of the president, secretary, and treasurer, among others. As the *baales* are already well entrenched in the day-to-day decision-making processes and their endorsement is important to guarantee the acceptance and efficiency of the new body, the explicit aim was also to include "ordinary people", meaning young people and especially women, as members of the cooperative. Unfortunately, for the time being, with one exception, all the cooperative members are male. However, it is stated in the bylaws of the cooperative that the empowerment of women in business and economic matters is a key objective of the established cooperative. A further goal is the minimum of 30 per cent women as cooperative members, as management committee, and as future staff running the biogas reactor, the community toilets, and the solar plant. Judging from past experience, this will not be easy given the fact that the traditional power structures in the community are deeply rooted. With the support and advice of a small external supervisory board serving in an honorary capacity and containing two women and one man, it is hoped that the set targets will be achieved and the operation of the cooperative and especially of the management committee will be effective. One of the key tasks of the committee will be the hiring, payment, and supervision of employees. For this purpose, three business plans were drafted to ensure the sustainable set-up and long-term operation of the envisioned Hotspot activities. The planned business activities will provide the badly needed infrastructure for approximately fifteen families (or roughly 120 people). As a business incubator, the Hotspot should serve as a pilot or prototype approach that could later be replicated in other parts of the community. Ideally, one day there could be a network of such Hotspots, providing urban services to the entire neighbourhood. Community toilet waste and sufficiently available fish waste – as previous research and consultation with the women in the community revealed – will provide the feedstock for a mini biogas reactor. The produced gas will be filled in rucksacks and sold against a small fee. One rucksack will then provide cooking gas for several hours and can replace the widely used firewood that harms the health of the people and pollutes the air. In the pilot phase, the necessary gas cookers will be distributed for free to the participating families. The pour-flush toilets can be used against a small fee, as is already common practice in Makoko. A mini solar plant on the roof of the Hotspot will provide the energy for a solar freezer to produce ice blocks and for bulbs to light the building. As Makoko is one of the many communities that live essentially off-grid, the women use ice blocks to preserve food, including the freshly caught fish. For now, women have to go to the market or other places outside the community to purchase the ice. In future, the ice blocks will be sold at the centrally located Hotspot, which will save the women in the neighbourhood valuable time and costs. Mobile phone charging services will be offered as an additional income source.

This third phase of the Makoko Neighborhood Hotspot, the implementation of the biodegradable toilets and the renewable energy production, started in spring 2017 with completion due in December 2017. The German Consulate-General in Lagos will provide the financial support to cover the costs of the toilets and the renewable energy technology while coverage of the project development costs will happen with funds that were raised through crowdfunding.

Makoko Neighborhood Hotspot (Isi Etomi, 2016)

The mentioned features should provide urban services, create jobs, and generate income as well as test and promote the use of renewable energies in the community. This needs confidence and trust, and the new technologies have to be affordable. For this purpose, the current prices in Makoko – such as for the purchase of firewood and the use of toilets – were analysed. Consequently, competitive sales prices are the starting point for the calculations on which the business plans are based. The necessary knowledge will be provided through intensive training in the beginning, and trust will be built as the Hotspot will hopefully prove successful and reliable in providing its services. Clearly, in the future, the replications of further Neighborhood Hotspots should become attractive for investors and no longer rely on donation and subsidies. In the long run, local governments in collaboration with community organisations should assume the maintenance and operation of such Neighborhood Hotspots.

Architecture as a mean to campaign for human rights

Other initiatives include the cooperation of FABULOUS URBAN with the Lagos-based human-rights organisation Justice & Empowerment Initiatives (JEI) and the community-based Nigerian Slum Dweller/Informal Settlement Federation (short: Federation). The Federation maps, profiles, and enumerates their own communities, and they maintain saving groups in order to implement small projects such as community toilets (JEI 2016). The Federation initiated the projects itself. In a series of preparatory meetings in spring 2016, the involved communities, Abete Ojora, Daramola, Orisunmibare, and Otodo Gbame, expressed their needs for sanitary solutions. Learning from the experience in Makoko, the procedure has been reversed, starting with the evaluation and selection of the land. As mentioned in the beginning of this chapter, the perception of slum communities by the government is very negative, often accusing them of being diseased criminals and using this at the same time as an argument for eviction. Otodo Gbame, one of the project communities, was repeatedly accused of polluting environmentally sensitive areas.[4] The request for sanitary solutions hence turned into a question of whether the community could stay or would be evicted. Despite the joint actions of the involved parties, the community of Otodo Gbame was evicted in November 2016 – in spite of a court judgement by the High Court that the evictions violated the right to dignity and were inhuman and cruel, especially as they happened on short notice and without providing alternative shelters. The High Court ordered the parties to enter mediation and to maintain the status quo. Slowly, parts of the community came back and started to rebuild only to be brutally evicted again in mid March 2017. Other slum communities are now sheltering the refugees; Makoko is among them.

From a technical design perspective, the infrastructure hub solution with biogas, cooking facilities, and gardens

4 "Lagos Clarifies Environmental Action at Otodo Gbame Community", https://lagosstate.gov.ng/blog/2017/03/21/lagos-clarifies-environmental-action-at-otodo-gbame-community/ (accessed 27 March 2017).

developed for this ancient Egun community by the Lagos lagoon in Lekki was not for nothing as it could be implemented in another community that offered enough space. The densely populated communities of Abete Ojora, Daramola, and Orisunmibare offer much less space, though, which currently leads to smaller on-site sanitary solutions. We are currently looking into the so-called biofil toilet system, which was invented in Ghana and is currently being tested there as well as in Kenya. A group of Federation members visited several slum communities in Kenya in March 2017 and had the chance to see some of these biofil toilet systems in operation. It's not exactly scalable like the sludge-treatment process we developed for Otodo Gbame that can serve 150 people or more; it's rather a household solution. We still aim at designing something more comprehensive than just toilets by adding solar panels or similar features.

Practicing as architects and urban designers in slum communities in Lagos requires a multilayered approach (and perseverance). In the described context, even the design of a simple toilet turns into a complex and strategic undertaking on many fronts. Moreover, architecture becomes a means to achieve something else rather than providing a structure or a building. The multilevel approach requires an operating process in a network of equal partners in a vertical hierarchy. The latter is most probably the most difficult to achieve. As we always need at least some initial funding, the vertical structure threatens to shift in a more horizontal one. This is always the case when external funding comes into a project. Ideally, we could just develop the project and hand it over to the communities for implementation. Given the current situation in Lagos, "a city of shanty towns and millionaires",[5] where the government is using violence against their own population and regularly violating fundamental human rights, this does not seem to be the most important priority. For now, the focus is on helping the people stay by simultaneously supporting them with strategic yet pragmatic upgrading measures that – as explained – may be an important piece in the fight against forced evictions.

5 "Lagos, a City of Shanty Towns and Millionaires", https://www.theworldweekly.com/reader/view/magazine/2017-03-23/lagos-a-city-of-shanty-towns-and-millionaires/9850 (accessed 27 March 2017).

Amnesty International, Nigeria (2017): *Tens of Thousands at Risk of Imminent Mass Forced Evictions in Lagos*. URL: http://www.amnesty.org/en/press-releases/2016/10/nigeria-tens-of-thousands-of-residents-of-waterfront-communities-at-risk-of-imminent-mass-forced-evictions-in-lagos/ (accessed 27 March 2017).

Giorgio Blundo/Pierre-Yves Le Meur (eds.) (2009): *The Governance of Daily Life in Africa*. Leiden/Boston: Brill.

Jérôme Chenal (2014): *The West African City. Urban Space and Models of Urban Planning*. Lausanne: EPFL.

Celine D'Cruz/Sonia Fadrigo Cadornigara/David Satterthwaite (2014): *Tools for Inclusive Cities. The Roles of Community-Based Engagement and Monitoring in Reducing Poverty*. IIED Working Paper, London. URL: http://pubs.iied.org/10708IIED (accessed 21 July 2016).

Fabulous Urban (1): *Makoko Neighborhood Hotspot*. URL: https://www.swiss-architects.com/de/fabulous-urban-zurich/project/makoko-neighborhood-hotspot (accessed 27 March 2017).

Fabulous Urban (2): *Makoko/Iwaya Waterfront Regeneration Plan*. URL: https://www.swiss-architects.com/de/fabulous-urban-zurich/project/makoko-iwaya-waterfront-regeneration-plan (accessed 27 March 2017).

Fabulous Urban/Heinrich Böll Stiftung/NSIBIDI Institute (eds.) (2016): *Open City Lagos*. Lagos: Heinrich Böll Stiftung.

Sean Fox (2011): "Understanding the Origins and Pace of Africa's Urban Transition", in: *Crisis States Working Papers Series*, 2, 89, London School of Economics and Political Science.

Matthew Gandy (2006): "Planning, Anti-Planning and the Infrastructure Crisis Facing Metropolitan Lagos", in: Martin J. Murray/Garth A. Myers (eds.): *Cities in Contemporary Africa*. New York: Palgrave Macmillian, pp. 247–263.

Marisa B. Guaraldo Choguill (1996): "A Ladder of Community Participation for Underdeveloped Countries", in: *HABITAT INTL.*, 20, 3, pp. 431–444.

Isabel Günther (2016): *Wirksame Entwicklungshilfe baut auf Fakten*. URL: http://dievolkswirtschaft.ch/de/2016/04/guenther-03-2016/(accessed 19 July 2016).

Heinrich Böll Stiftung/Fabulous Urban (eds.) (2016): *Urban Planning Processes in Lagos. Policies, Laws, Planning Instruments, Strategies and Actors of Urban Projects, Urban Development, and Urban Services in Africa's Largest City*. Lagos: Heinrich Böll Stiftung.

Fabienne Hoelzel (2016a): "Rethinking Governance to Bring about the 'Good City': The Case of Lagos", in: Fabulous Urban/Heinrich Böll Stiftung Nigeria/NSIBIDI Institute (eds.): *Open City Lagos*. Lagos, pp. 2–10.

Fabienne Hoelzel (2016b): "Which Way, Lagos?", in: Heinrich Böll Foundation/Fabulous Urban (eds.): *Urban Planning Processes in Lagos. Policies, Laws, Planning Instruments, Strategies and Actors of Urban Projects, Urban Development, and Urban Services in Africa's Largest City*. Lagos. URL: https://ng.boell.org/sites/default/files/160206_urban_planning_processes_digital_new.pdf (accessed 18 July 2016).

Fabienne Hoelzel (2016c): "Zurück in die Zukunft", in: A. Gerber/S. Kurath (eds.): *Stadt gibt es nicht! Unbestimmtheit als Programm in Architektur und Städtebau*. Berlin: Dom Publishers, pp. 233–245.

Margo Huxley (2009): "The Limits to Communicative Planning", in: *Journal of Planning Education and Research*, 19, 369, DOI: 10.1177/0739456X0001900406.

JEI (2016): *Movement-Building & Inter-Community Solidarity*. URL: http://www.justempower.org/movement-building/ (accessed 18 August 2016).

Otto H. Koenigsberger (1983): "The Role of the Planner in a Poor (and in a Not Quite So Poor) Country", in: *HABITATINTL.*, 7, 112, pp. 49–55.

Lagos State Government (2017): *Lagos Clarifies Environmental Action at Otodo Gbame Community*. URL: https://lagosstate.gov.ng/blog/2017/03/21/lagos-clarifies-environmental-action-at-otodo-gbame-community/(accessed 27 March 2017).

Taibat Lawanson (2016): "Governing Lagos in the Urban Century. The Need for a Paradigm Shift", in: Heinrich Böll Stiftung/Fabulous Urban (eds.): *Urban Planning Processes in Lagos. Policies, Laws, Planning Instruments, Strategies and Actors of Urban Projects, Urban Development, and Urban Services in Africa's Largest City*. Lagos, pp. 217–220.

Branko Milanovic (2016): *Global Inequality. A New Approach for the Age of Globalization*. Cambridge: Belknap Harvard.

Felix C. Morka (2007): *A Place to Live. A Case Study of the Ijora-Badia Community in Lagos, Nigeria. Case Study Prepared for Enhancing Urban Safety and Security. Global Report on Human Settlements 2007*. URL: http://www.unhabitat.org/grhs/2007 (accessed 22 July 2016).

Martin J. Murray/Garth A. Myers (eds.) (2011): *Cities in Contemporary Africa*. New York: Palgrave Macmillian.

Ambe J. Njoh (ed.) (2012): *Africa. Historical, Theoretical and Practical Dimensions of a Continent's Water and Sanitation Problematic*. Farnham: Ashgate.

Our World in Data (2017): *World Poverty*. URL: https://ourworldindata.org/world-poverty/#share-of-the-population-below-the-international-poverty-line (accessed 27 March 2017).

Michael Pacione (2005): *Urban Geography*. Abington: Routledge.

UN-Habitat (2013): State of the World's Cities 2012/2013. Prosperity of Cities. Nairobi/New York: Routledge.

UN-Habitat (2016): *Housing and Slum Upgrading*. URL: http://unhabitat.org/urban-themes/housing-slum-upgrading/ (accessed 18 July 2016).

The Economist (2017): *The Young Continent. With Fertility Rates Falling More Slowly Than Anywhere Else, Africa Faces a Population Explosion*. URL: http://www.economist.com/news/briefing/21679781-fertility-rates-falling-more-slowly-anywhere-else-africa-faces-population (accessed 17 March, 2017).

The Gazelle News (2017): *LASG/France To Strengthen Partnership To Upgrade Slums, Boost Infrastructures*. URL: http://www.thegazellenews.com/2016/04/05/lasgfrance-to-strenghten-partnership-to-upgrade-slums-boost-infrastructures (accessed 27 March 2017).

The World Weekly (2017): *Lagos, a City of Shanty Towns and Millionaires*. URL: https://www.theworldweekly.com/reader/view/magazine/2017-03-23/lagos-a-city-of-shanty-towns-and-millionaires/9850 (accessed 27 March 2017).

Ivan Turok (2011): "Linking Urbanisation and Development in Africa's Economic Revival", in: Susan Parnell/Edgar Pieterse (ed.): *Africa's Urban Revolution*. New York: Zed Books.

United Nation New York (2015): *World Population Prospects. The 2015 Revision. Key Findings and Advance Tables*, pp. 4–5.

Vanessa Watson (2009): "'The Planned City Sweeps the Poor Away …' Urban Planning and 21st Century Urbanisation", in: *Progress in Planning*, 72, pp. 151–193.

Vanessa Watson (2014): "African Urban Fantasies", in: *Environment and Urbanization*, 26, 1, pp. 215–231. DOI: 10.1177/0956247813513705.

World Bank (2017): *Fertility Rate, Total (Births per Woman), Nigeria*. URL: http://data.worldbank.org/indicator/SP.DYN.TFRT.IN?locations=NG (accessed 17 March 2017).

Understanding housing-finance strategies of informal settlement dwellers in Dar es Salaam/ Christiane Rudić

Christiane Rudić is an urban geographer who obtained her PhD at the Bayreuth International Graduate School of African Studies (BIGSAS), University of Bayreuth. She has worked as a freelance consultant on various issues concerning housing finance and urban development in the global South. She currently works as a neighbourhood manager in a disadvantaged neighbourhood in Mannheim, Germany.

Introduction

Planned interventions focusing on housing of the urban poor have undergone three major phases, which developed along with shifts in development theories. These interventions were implemented by government authorities, often with some support from external donors (Harris/Arku 2006, 2007; Harris/Giles 2003; Stren 1990). The first phase was dominated by ideas of modernisation, which resulted in massive slum clearance, the construction of public housing, and preventive measures hindering further rural-urban migration (see Hardoy/Mitlin/Satterthwaite 2001: 220; Hardoy/Satterthwaite 1995 106). Criticism of the widespread bulldozing of informal settlements and insufficient alternative public housing provision initiated the second major phase of planned intervention. Influential actors like Turner (1976, and 1972 with Fichtner), Mangin (1967), and Abrams (1964, 1966) finally acknowledged the self-help character of informal housing and viewed informal settlements as part of the solution rather than the problem. Based on these ideas and recognising the important employment and multiplier effects generated by housing, the World Bank started to support "aided self-help" initiatives, like sites-and-services schemes, core housing, and in-situ upgrading projects (Hardoy et.al. 2001: 221; Harris/Arku 2007: 1). Key criticisms of supported self-help programmes include their neglect of unequal power relations between the urban poor and the state, and numerous documentations of their failures in providing and improving low-cost housing (Burgess 1977, 1985; Nientied/Van der Linden 1988; Mathéy 1997). As a consequence the World Bank withdrew its financial support and increasingly turned its focus towards the "enabling approach" (World Bank 1993). This strategy was embedded in the global shift towards neoliberalism and aimed at policy reforms, decentralisation, and a withdrawal of public subsidies for housing. Since then governments and international donors have increasingly focused on issues of land regularisation, infrastructure upgrading, and the provision of housing finance (Harris/Arku 2006: 1014). Jones and Datta refer to this policy shift as moving "from self-help to self-finance" (1999: 4), because the objective is now to enable financial institutions to provide mortgage finance for middle- and upper-income groups while significantly drawing on the microfinance boom for housing microfinance provision to low-income groups.

Microfinance for investments in small enterprises has definitely become mainstream within development cooperation aiming at poverty alleviation. The most important foundation of its success, which demonstrated that the poor are "creditworthy", is the strategy of group lending (Armendáriz/Morduch 2007: 85–88). Although microfinance aims at providing different financial services on a micro scale, including savings, insurance, or money transfer, most microfinance institutions (MFI) still concentrate on providing loans. Some authors therefore prefer to use the term "microdebt" in order to emphasise that there is a considerable risk involved for customers, because MFIs "tend to stick by hard and fast rules" (Armendáriz/Morduch 2007: 171; see Hospes/Lont 2004: 3). Various authors have shown that the provision of microfinance can result in increased vulnerability and poverty (Huq 2004; Matin 1997; Armendáriz/Morduch 2007: 170) while other authors doubt that microloans have a generally positive effect on customers' livelihoods (see Banerjee/Duflo 2011: 171; Bateman 2010; Dichter/Harper 2007).

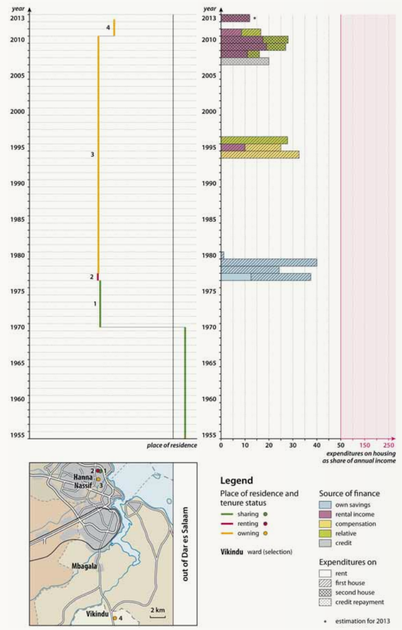
The recent run on housing microfinance as the new panacea to informal urban growth is embedded in this mainstream and seems to build on the assumption that it is the lack of credit that causes poor housing conditions. In this light, it becomes absolutely important to understand the more common and informal strategies of housing finance in order to assess whether housing microfinance or other planned interventions are really a feasible way to tackle poor urban housing conditions.

Dar es Salaam is no exception is this respect. In Tanzania's largest city, with a population of more than 5 million (the last census, conducted in October 2012, revealed a population of almost 4.4 million; see URT 2013: 2), different interventions have been implemented over the past decades to address informal and unplanned urban growth. Since 1948, the population of the city has doubled about every ten years (Kombe 1994: 25), and most of this growth was absorbed in the numerous informal settlements. Estimations of the share of inhabitants living in Dar es Salaam's informal settlements range between 70 and 80 per cent (Kironde 2006: 463; Kombe/Kreibich 2000: 41).

This article presents insights from intense field research conducted between 2009 and 2014 in Dar es Salaam, which combined a mix of methodological approaches including ethnographic fieldwork, qualitative methods, and quantitative interviews with 300 households (see Rudić 2016). By covering four informal settlements at central and peripheral locations, the impacts of different interventions on informal housing were studied too, including the provision of housing microfinance, infrastructure upgrading, land formalisation, and eviction. The analysis of this data allows the identification of the main actor groups, their housing, and housing-finance strategies and highlights crucial factors that influence the decision and ability of actors to invest, or not. To vividly demonstrate some of the most important findings, the paper is structured around the housing

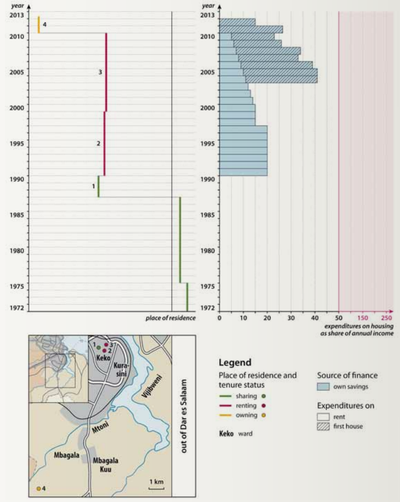
Three housing (finance) biographies

Salum's housing biography (Fig. 1) depicts the common housing strategies of most individuals, who start by living in shared accommodation owned by their parents or other relatives. Rural-urban migrants like Salum, who was born on Pemba Island, usually rely on accommodation provided by relatives or friends, emphasising the important role of social networks in the context of housing (see Fig. 1, Place of residence No. 1). Only after becoming economically independent do these young adults or migrants aspire to a more independent life and search for rental housing (see Fig. 1, Place of residence No 2). To pay his rent for three months upfront, Salum saved money on a daily basis in his savings box. Like in Salum's case, the first and often the subsequent rental accommodations are usually located in the same neighbourhood in which a migrant arrived or in which a person's parental home was located (see Fig. 1). Thus, when he married in 2000, he moved to a larger accommodation but remained in the same neighbourhood (see Fig. 1, Place of residence No. 3). Salum earned his income from selling fried fish in his neighbourhood, and his well-running business was a lifeline that allowed him to pay rent without difficulty while investing also in homeownership. When moving into homeownership, however, people are usually forced to move to more distant locations. This is mainly because the centrally located neighbourhoods are already highly congested, and one can only access homeownership through inheritance or the purchase of a house, which is very difficult to finance. Instead, the majority of home-owners, like Salum, prefer to finance investments incrementally and mainly rely on their income from informal sector occupation. However, between generating income and spending on construction, people still need periods of saving. To finance housing, therefore, most homeowners save their money in kind, often literally saving cement bag by cement bag. Salum's case is exceptional in this respect, since he successfully used a local *upatu* group (a rotating savings-and-credit group) as an intermediary to accumulate his savings before investing them in incremental construction. However, fearing the loss of his income, which he continues to generate in the neighbourhood where he lived as a tenant, Salum waited quite a long time to move into his own house (see Fig. 1, Place of residence No. 4). In order to not lose his profitable income source, he now commutes about two hours to and from work and spends almost €1 per day doing so, since demand in his new peripheral neighbourhood is still too low.



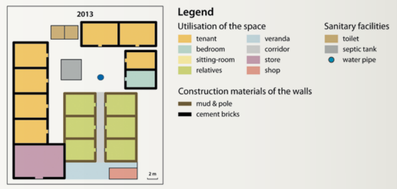
Salum's housing and housing-finance biography (Fig. 1) (draft C. Rudić, graphic J. Blauhut)

Ali's housing biography (Fig. 2) differs from Salum's, mainly because Ali is already a *mzee* (elderly person) and had therefore faced very different conditions when he arrived in the city. Nonetheless, he also went through the stages of sharing with family members and renting housing in the same neighbourhood, but he was quickly able to move into homeownership since it was still easy to find a plot for sale in the centrally located settlements at that time (see Fig. 2, Place of residence No. 3). The house was rather a *banda* (hut) made from mud and poles, and shortly after moving in, he and his wife replaced the thatched roof with corrugated iron sheets and improved the walls. In the 1980s, Ali worked as a waiter at a publicly owned hotel but lost his job in 1994 when the hotel was privatised. However, he was granted a compensation payment, which he used to replace the mud and pole structure with cement bricks and to add new rooms. He started to rent out most parts of his house, which helped him generate income and access financial resources, which he invested in a water tap on the plot. One year later, his mother became a widow and decided to move in. She financed the construction of two rooms, which were rented out after she passed away a few years later. Although he sometimes worked as a casual labourer, most of the household income was generated at home, by selling water to the neighbours and by letting rooms. Life was hard, and therefore no investments were made until 2007, when some of his fellow party members told him about a home-improvement loan provided by a local NGO, which also provided support to access legal title deeds. The loan of about €100 was used to replace leaky roofing sheets, plaster the interior, repair the floor, and buy a new door. Consequently, Ali increased the rent. Then, one of Ali's tenants asked him to improve the interior of her rental units too. Since Ali was still repaying his microloan, the tenant offered to finance the investments herself, and they agreed to deduct the spent amount from her rental payments. When Ali repaid his microloan, he decided to buy from a friend a cheap second plot at the urban fringe for his retirement. Using the rental payments, financial support from his daughter, and the help of a related craftsman, he financed the construction of a two-room house with a store and a mini shop just south of the administrative border of Dar es Salaam. After replacing the old pit latrine at his old house in the city centre with the help of his daughter, Ali moved to his new house, where his wife and son had started to operate the mini shop and kept several chickens (see Fig. 2, Place of residence No. 4). If the neighbouring logistics company finally starts to operate, Ali hopes the family can boost household income by providing food and drink to the workers. The upkeep of his family, at least, is relatively well secured by rental income, which increased over recent years due to increasing demand as well as the money generated from selling water. Hence, the first house helped Ali to finance his second house.



Ali's housing and housing-finance biography (Fig. 2)

The last case concerns Mohammed, who, in his early forties, lives as a single in the very same house he was born (Fig. 3). He worked as a casual labourer and operated a mini shop in front of the house, where he sold groceries. After his father died in 1999, the three sisters and four brothers sat together with their paternal and maternal relatives to discuss the inheritance of the house. The house was a typical six-room Swahili house with eight backyard rooms, so each of the siblings inherited one room for their personal use and one additional room to let (for more information about the architectural layout and the advantages and disadvantages of the Swahili house, see, for example, Nguluma 2003 or Sheuya 2004). Moreover, there was a charcoal store, the mini shop, and a water pipe on the plot, which were used by the siblings for economic activities. Two of the sisters, who had married and moved out, left their personal rooms with their brothers who had wives and children, but they continued to collect the rents of their respective rental units. Mohammed himself occupied a room in the backyard, because he was able to collect more money for a room within the more secure Swahili house. If Mohammed and his siblings were to invest in the house, they would have to negotiate an equal amount that everyone could afford. Usually they therefore used their rental income and contributed their own manpower. They would also lend to each other if one sibling were unable to pay. In this way, they had replaced the roof, which was once blown away by a heavy storm, and organised the plastering of the walls in the main house after the mud and pole structure had become wet. Mohammed perceived his relationship with his siblings as very important. They helped each other in cases of emergency, and they shared the responsibility of financing repairs and maintenance. However, he also considered this shared ownership to be an obstacle to larger-scale investments, since not everyone was willing or able to contribute more substantial amounts. As a consequence, the condition of the house has been deteriorating over the past years. Once, Mohammed tried to find out whether he could borrow money from a bank to replace the old main house with a cement brick structure, but when the credit officers heard about the shared ownership arrangement, they instantly refused, saying that it was likely to cause problems in repayment responsibilities and discipline. He and his siblings were willing to sell the house, which was adjacent to encroaching light industries, but only for a price that would allow each of the seven siblings to buy land and construct a house somewhere in the hinterland.



Layout of the house owned by Mohammed and his siblings and its spatial utilisation (Fig. 3)

biographies of three individuals living in one of the research areas. On this basis, the conclusion outlines the opportunities and challenges for low-cost housing schemes or other interventions in informal settlements.

Understanding the different actor groups

These biographies show that the main actors in the context of housing finance are not only structure owners but also tenants and "quasi-owners" who live in rather complex home-ownership arrangements as a consequence of customary inheritance procedures, like Mohammed. Owners and quasi-owners, representing 44 per cent and 14.4 per cent respectively of all interviewed households, either invest at their current place of residence and/or at another location, like Ali did. This strategy is not an exception: about one third of 110 interviewed homeowners own another plot somewhere else, and one fifth intend to relocate in the future. But while 61.4 per cent of owners and quasi-owners invested in their current places of residence in the last five years, at least one quarter did not invest in their homes, even though they might perceive their housing conditions as inadequate.

A closer look at the differences between owner and quasi-owner households reveals some remarkable insights. Although they have on average similar household incomes to owners (about €200 per month for seven household members) and similar income sources (about 50 per cent engaged in petty landlordism), quasi-owners are less likely to have financed recent investments (53.3 per cent vs. 63.6 per cent), and if they invested recently, they invested considerably less money (on average €250; median: €150) than owners (on average €575; median: €250). It is therefore not surprising that almost half of all interviewees living in shared homeownership arrangements intend to relocate in the future, compared to only 21.8 per cent of regular owners. Not making investments is hence not exclusively tied to lacking sufficient income, as the differences between owners' and quasi-owners' investment strategies demonstrate.

Tenants (41.6 per cent of interviewees), often overlooked in the context of housing finance, also pursue different strategies: often they invest in their own housing at the urban fringe (potentially 36.5 per cent) while being obliged to regularly pay for rental housing. Usually, tenants are obliged to pay their rents, which stood between €7 and €15 per month per room, for six or twelve months in advance (43.7 per cent and 13.6 per cent of all tenants respectively). Additionally, and as Ali's case demonstrated, in one out of six houses covered by the survey, tenants invested in the improvement or construction of commercial or residential rental premises. Consequently tenants provide a major source of housing finance for landlords either by paying their rents (usually in semi-annual or annual instalments) or by directly financing improvements and construction (see below).

Means and sources of housing finance

According to the survey, the major sources of housing finance are own savings (89.9 per cent). Only 1.1 per cent of all interviewed owners and quasi-owners used credits, but due to the sampling procedure of the study, 29.5 per cent of interviewees were found to have used compensation payments as a result of displacement. Another 5.7 per cent of respondents had used pension payments, which can sometimes be paid out in large instalments, 2.3 per cent had support from family members abroad, and one household had sold the old house to buy a new one.

Through qualitative interviews, however, it became clear that accumulating "own savings" entailed more than just saving money in a box until it suffices to start construction. Of course, this strategy is common, but saving money "at home" is perceived as very risky, since it can be lost, stolen, or used for other purposes. Therefore, the most common way to finance housing is saving "in home", which entails the saving of money at home until it suffices to buy construction materials in small bulk (often a bag of cement). Hence, on most compounds, no matter if located at the urban fringe or at inner city locations, one can find either some bags of cement, some bricks, piles of sand, timber, or single roofing sheets waiting to be used. These are stored at home until the owner has accumulated enough material and cash to pay for the craftsman. One could therefore argue that most owners indeed save brick by brick (Banerjee/Duflo 2011: 184), cement bag by cement bag, roofing sheet by roofing sheet, and wall by wall. The rising consumer prices for construction material in Tanzania and its high inflation rate suggest that one can save quite considerable amounts of money buying the materials as early as possible instead of storing cash at home in or in bank accounts, where it depreciates in value over time. The house therefore principally serves as a savings account.

Although about half of all owners, 25 per cent of quasi-owners, and 34.6 per cent of tenants owned a bank account, only seven households were able to make substantial savings, and only one household had used a bank loan to invest in housing. Savings in bank accounts are therefore not regularly used to finance housing in informal settlements.

About one third of owners and tenants participated in rotating savings-and-credit schemes, which they call *mchezo* (game) or *upatu* (giving each other), reflecting that people hardly perceive the capital sum provided by an *upatu* as a loan (see Ardener 1996: 6–7). Almost 40 per cent of these – both tenants and owners – claimed to use their disbursements specifically for housing-related investments, like Salum did, but many only made quite small contributions. Only in a few cases, rotating savings-and-credit groups were used to finance housing on a substantial scale. Interestingly though, one exceptional *upatu* group at the urban fringe was so focused on housing that the members contributed the amount of one bag of cement every month and disbursed it to one of the ten members. Hence, every ten months, each member was able to buy ten cement bags and proceed with construction.

Finally, a last strategy that interviewees subsumed under "own savings" originates from the rental income of owners who engage in petty landlordism, which usually entails letting out single rooms on the same plot that the landowner resides on. Money earned from letting is a particularly important source of income since it provides regular and permanent access to income, which most people working in the informal sector lack. Since rent is often demanded in annual or semi-annual instalments, rental income enables landlords to access larger lump sums that are often directly reinvested in housing. These investments usually pay off very well, since rents are usually adjusted afterwards. Some authors call this a "self-financing mechanism", in which the house pays for itself (see Payne 2002: 158; Sheuya 2007: 449), but it can also be seen as a strategy to "transfer the savings responsibility to the tenant" (Rudic 2016: 338). Instead of saving the money themselves, it has become common practice among landlords to force their tenants to save larger lump sums. Of course, this can be a large burden to the tenants, who are also dependent on irregular and fluctuating incomes from informal sector work. In some cases, however, tenants may even invest themselves in their rental premises: in one out of six houses covered by the survey, a tenant had improved the residential or commercial rental units or even financed their entire construction. This helps landlords, who lack sufficient financial means to invest, while also benefitting tenants, who can use improved structures. The amount spent is usually deducted from the monthly rent, like in Ali's case. Tenants, therefore, play multiple roles in the context of informal housing finance, which should be acknowledged when developing housing schemes, which usually do not provide adequate space for petty landlordism.

Hence, own savings consist of much more than just saving small sums of cash at home. It includes a number of financial sources and strategies of actually saving the money from other expenditures. All of these different savings strategies, however, share common features: they are mainly derived from household income, and they are more or less free of charge.

Besides the important role of petty landlordism as explained above, Salum's case showed that close social ties and trust are important to establish and run a successful business. Although he moved to a very distant location at the urban fringe, he, and many other interviewees, kept operating their businesses at the old locations. The main reason is that demand for goods and services is still low at the urban fringe,

and hence opportunities to operate home-based businesses are yet built up close ties with their new neighbours and that in business life it was important to know whom you can trust. Peripheral locations are therefore less profitable than the densely populated inner city settlements. The data reveals, however, that owners pursuing a home-based economic activity (except for petty landlordism) earned almost double the amount earned by owners who did not pursue any home-based business. It is therefore not surprising that 70 per cent of all owners supplemented their incomes with home-based activities, like small-scale chicken rearing, selling food items or groceries, or operating small mini shops. Although only 18.3 per cent of all tenants generated some income at home (most of them are not allowed to do so by their landlords), those who do earn on average €30 more per month. Hence, the opportunity to supplement informal sector income with some home-based economic activities is crucial for securing one's livelihood and for making further investments in housing. Moving to a distant location, though, which is often the case when participating in core housing schemes or having recently moved into homeownership, can tremendously weaken the household's income base.

Conclusion

This article identified three major actor groups in the context of housing finance and provided some insights about the housing and housing-finance strategies of informal settlement dwellers in Dar es Salaam. On this basis, some challenges and opportunities for development interventions, like low-cost housing schemes, were identified.

The article showed that a considerable (and most probably growing) proportion of households, called quasi-owners, owns housing but may not be willing to invest, because home-ownership is shared among several individuals. This group has not yet been at the focus of development interventions and will certainly pose challenges to conventional programmes. Inheritance, however, often provides the only way to access home-ownership for many and guarantees access to housing for a large number of individuals more or less free of charge.

Homeowners were shown to use different ways of accumulating own savings to finance investments. This strategy allows for maximum flexibility: investments can be postponed or accelerated depending on the household's income situation. Very few have experience with microcredits, and many fear the social consequences of repayment failure. Microcredits can be suitable to support the incremental construction process and to improve housing conditions and even household income, as it was shown. Many products are, however, expensive and instead provided to moderate-income households. Small loans coupled with training and financial advice, like in Ali's case, are very helpful for clients but too expensive for institutions. Many institutions therefore focus on low-cost housing schemes to help tenants move into homeownership at the urban fringe.

As it was shown, tenants play multiple roles in the context of housing finance and provide many opportunities for home (and income) improvements for landlords. Low-cost housing interventions, however, usually reduce tenants to their role as future homeowners and fail to consider the impacts of moving to a distant and peripheral location on household income. Instead, assessments of creditworthiness based on the household's income situation are usually made before moving to the new location without considering associated costs and reduced productivity. Moreover, house designs hardly provide adequate spaces for petty landlordism or other home-based economic activities while in some schemes such activities are even prohibited, depriving new homeowners of the potential to diversify household income.

Even if low-cost housing schemes offer comparably cheap access to homeownership, households need a reliable and regular income source at least for the time of making repayments. Thus, most low-cost housing schemes are low-cost in name only, since such houses are usually either too expensive or – even if houses are cheap – not financeable by the vast majority. Hence, it is once more important to emphasise that informal settlements provide access not only to affordable and financeable housing but also to various opportunities to generate income. Because of their diverse mix of residential, commercial, and social functions, they are lively urban places, which are hardly generated by top-down planning. They should be rather viewed as part of the solution to house the majority of low-income urban residents instead of being permanently problematised.

Charles Abrams (1964): *Man's Struggle for Shelter in an Urbanizing World*. Cambridge, MA: MIT Press.

Charles Abrams (1966): *Housing in the Modern World*. London: Faber and Faber.

Shirley Ardener (1996): "Women Making Money Go Round. ROSCAs Revisited", in: S. Ardener/S. Burman (eds.): *Money-Go-Rounds. The Importance of Rotating Savings and Credit Associations for Women*. Oxford, UK, Washington, DC: Berg (Cross-Cultural Perspectives on Women series 15), pp. 1–19.

Beatriz Armendáriz/Jonathan Morduch (2007): *The Economics of Microfinance*. Cambridge, MA: MIT Press.

Abhijit V. Banerjee/Esther Duflo (2011): *Poor Economics. A Radical Rethinking of the Way to Fight Global Poverty*. 1st edn. New York: PublicAffairs.

Milford Bateman (2010): *Why Doesn't Microfinance Work? The Destructive Rise of Local Neoliberalism*. London: Zed.

Robert Burgess (1977): "Self-Help Housing. A New Imperialist Strategy? A Critique of the Turner School", in: *Antipode*, 9, 2, pp. 27–47.

Robert Burgess (1985): "The Limits of State Self-Help Housing Programmes", in: *Development and Change*, 16, pp. 271–312.

Thomas Dichter/Malcolm Harper (eds.) (2007): *What's Wrong with Microfinance?* Rugby: Practical Action Publishing.

Jorge E. Hardoy/Diana Mitlin/David Satterthwaite (2001): *Environmental Problems in an Urbanizing World. Finding Solutions for Cities in Africa, Asia, and Latin America*. Sterling, VA: Earthscan Publications.

Jorge E. Hardoy/David Satterthwaite (1995): *Squatter Citizen. Life in the Urban Third World*. Repr. London: Earthscan Publ.

Richard Harris/Godwin Arku (2006): "Housing and Economic Development. The Evolution of an Idea since 1945", in: *Habitat International*, 30, pp. 1007–1017.

Richard Harris/Godwin Arku (2007): "The Rise of Housing in International Development. The Effects of Economic Discourse", in: *Habitat International*, 31, pp. 1–11.

Richard Harris/Ceinwen Giles (2003): "A Mixed Message. The Agents and Forms of International Housing Policy, 1945–1973", in: *Habitat International*, 27, pp. 167–191.

Otto Hospes/Hotze Lont (2004): "Introduction", in: H. Lont/O. Hospes (eds.): *Livelihood and Microfinance. Anthropological and Sociological Perspectives on Savings and Debt*. Delft: Eburon, pp. 3–24.

Hamidul Huq (2004): "Surviving in the World of Microdebt. A Case from Rural Bangladesh", in: H. Lont/O. Hospes (eds.): *Livelihood and Microfinance. Anthropological and Sociological Perspectives on Savings and Debt*. Delft: Eburon, pp. 43–53.

Gareth A. Jones/Kavita Datta (1999): "From Self-Help to Self-Finance. The Changing Focus of Urban Research and Policy", in: K. Datta/G. A. Jones (eds.): *Housing and Finance in Developing Countries*. London, New York: Routledge (Routledge Studies in Development and Society series 7), pp. 3–25.

Lusugga J. M. Kironde (2006): "The Regulatory Framework, Unplanned Development and Urban Poverty. Findings from Dar es Salaam", in: *Land Use Policy*, 23, pp. 460–472.

Wilbard J. Kombe (1994): "The Demise of Public Urban Land Management and the Emergence of Informal Land Markets in Tanzania. A Case of Dar es Salaam City", in: *Habitat International*, 18, 1, pp. 23–43.

Wilbard J. Kombe/Volker Kreibich (2000): *Informal Land Management in Tanzania*. Dortmund: Spring Centre University of Dortmund (Spring Research series 29).

William Mangin (1967): "Latin American Squatter Settlement. A Problem and a Solution", in: *Latin American Research Review*, 2, pp. 65–98.

Kosta Mathéy (1997): "Self-Help Approaches to the Provision of Housing. The Long Debate and a Few Lessons", in: J. Gugler (ed.): *Cities in the Developing World. Issues, Theory, and Policy*. Oxford: Oxford University Press, pp. 280–290.

Imran Matin (1997): "Repayment Performance of Grameen Bank Borrowers. The 'Unzipped' State", in: *Savings and Development*, 21, 4, pp. 451–473.

Huba Nguluma (2003): *Housing Themselves. Transformation, Modernisation and Spatial Qualities in Informal Settlements in Dar es Salaam, Tanzania*. Dissertation submitted at the University of Stockholm. URL: http://kth.diva-portal.org/smash/get/diva2:9299/SPIKBLAD.pdf (accessed 2 July 2017).

Peter Nientied/Jan van der Linden (1988): "Approaches to Low-Income Housing in the Third World", in: J. Gugler (ed.): *The Urbanization of the Third World*. Oxford: Oxford University Press, pp. 138–156.

Geoffrey K. Payne (2002): "Tenure and Shelter in Urban Livelihoods", in: C. Rakodi/T. Lloyd-Jones (eds.): *Urban Livelihoods. A People-Centred Approach to Reducing Poverty*. London: Earthscan, pp. 151–164.

Christiane Rudić (2016): *Housing Finance Strategies of Informal Settlement Dwellers. Factors of Influence and Impacts of Planned Interventions in Dar es Salaam*. Berlin: LIT (Beiträge zur Afrikaforschung series 68).

Shaaban S. Sheuya (2004): *Housing Transformations and Urban Livelihoods in Informal Settlements. The Case of Dar es Salaam, Tanzania*. Dortmund: Spring Centre University of Dortmund (Spring Research series 45).

Shaaban A. Sheuya (2007): "Reconceptualizing Housing Finance in Informal Settlements. The Case of Dar es Salaam, Tanzania", in: *Environment and Urbanization*, 19, pp. 441–456.

Richard E. Stren (1990): "Urban Housing in Africa. The Changing Role of Government Policy", in: P. Amis/P. Lloyd (eds.): *Housing Africa's Urban Poor*. Manchester: Manchester University Press (International African Seminars, New Series 4), pp. 35–54.

John F. C. Turner (1976): *Housing by People. Towards Autonomy in Building Environments*. London: Boyars.

John F. C. Turner/Robert Fichter (eds.) (1972): *Freedom to Build. Dweller Control of the Housing Process*. New York: Macmillan.

United Republic of Tanzania (URT) (2013): *2012 Population and Housing Census*. National Bureau of Statistics. Dar es Salaam.

World Bank (1993): *Housing. Enabling Markets to Work*. A World Bank Policy Paper. Washington DC: World Bank.

Close Encounters: Architecture and Community in Khayelitsha /Alfredo Brillembourg, Hubert Klumpner, and Alexis Kalagas

An aerial view of the Empower Shack scheme, which will include new public and shared spaces (U-TT/ETH)

Alfredo Brillembourg and Hubert Klumpner co-founded the interdisciplinary design practice Urban-Think Tank (U-TT) in Caracas, Venezuela, in 1998. Since 2010, they have held a joint chair of architecture and urban design at ETH Zurich, where Klumpner also served as the dean of the Department of Architecture. As co-principals of U-TT, they have received the 2010 Ralph Erskine Award, the 2011 Holcim Gold Award for Latin America, and the 2012 Holcim Global Silver Award. They were also part of the Golden Lion-winning team at the 2012 Venice Biennale of Architecture.

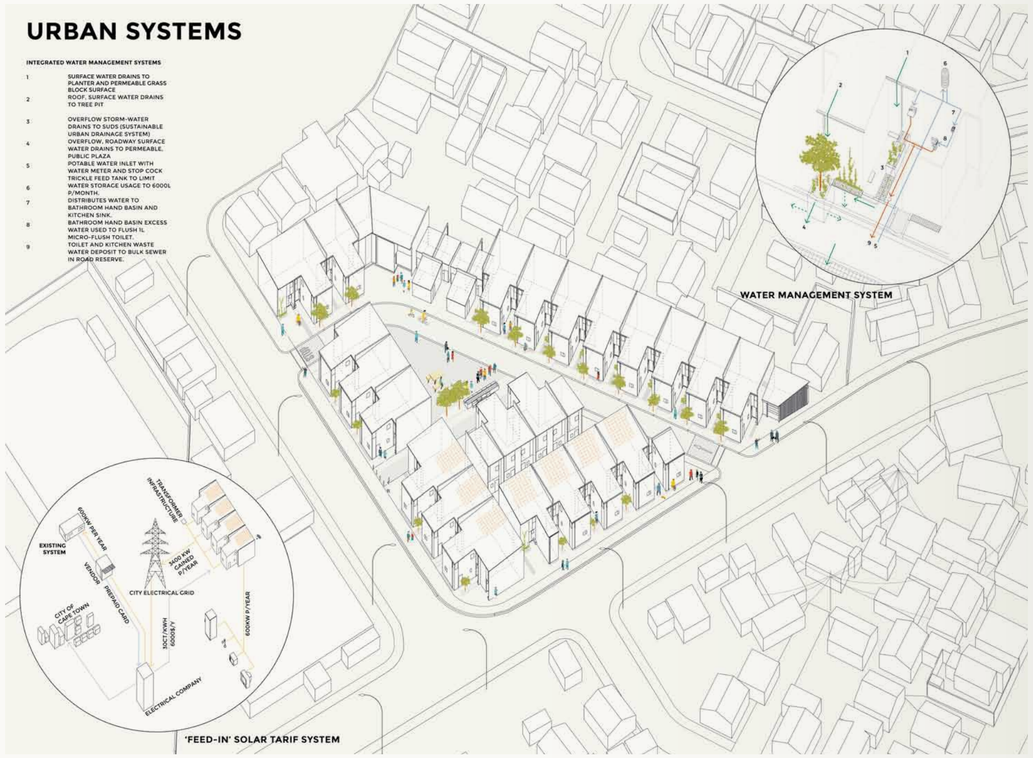
Alexis Kalagas is a writer and researcher at the Urban-Think Tank Chair of Architecture and Urban Design at ETH Zurich. He co-edited *Reactivate Athens: 101 Ideas* (Ruby Press, 2017) and has guest edited three editions of *SLUM Lab* magazine. His writing has appeared in numerous publications, including *Architectural Design*, *Perspecta*, *trans magazin*, *a+t*, and *Harvard Design Magazine*.

From wired co-working spaces to community gardens blooming in abandoned lots, commoning has re-emerged as a hot topic in contemporary debates around sustainability, participative citizenship, and alternative modes of urban living. The reasons for this could be the subject of an entirely different debate – commentators have invoked everything from the fraught reality of the gig economy to the millennial rise of single person households, the throwback techno-utopianism that drives Silicon Valley, or the creeping commodification of public space. But what happens when we distinguish sharing as a lifestyle choice from sharing as necessity? More often than not, diverse forms of commoning are an unavoidable part of life in the informal city. These arrangements can arise from economic constraints, legal limbo, overcrowding, transplanted rural traditions, or simply the security and comfort that a supportive community can provide when navigating a precarious urban environment.

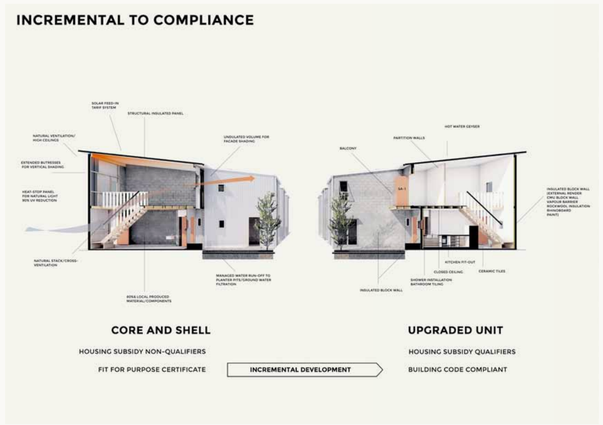
But practices of sharing are usually one of the first victims of social housing initiatives and urban redevelopment, whether for reasons of ideology or aspiration. In Cape Town, where our Empower Shack project is situated, apartheid-era planners explicitly sought to separate members of the population along racial lines, in the process embracing the atomising effect of detached, low-rise suburban sprawl. Since 1994, state-subsidised housing has failed to keep pace with a shortage of over 2.5 million units. More than 2,700 informal settlements now exist nationwide. Even where new dwellings have been delivered, they continue to reproduce the minimum-existence typologies of the past en masse, wedded to the symbolism of a pitched roof house and fenced yard. As a result, while traditions and spatial practices of communal life have long existed in South Africa, they have not always survived intact when confronted by the power of rapid urbanisation.

The implications of this transition are not lost on those who live in informal settlements. BT Section is a community of sixty-eight self-built shacks located in the wider township of Khayelitsha. It is also the pilot site for our Empower Shack project. In our discussions with residents, most of whom moved from smaller villages in the Eastern Cape in search of jobs, the role of community in everyday life is a recurring topic – both good and bad. Cramped conditions have imposed a certain kind of intimacy, throwing people together and forcing them to negotiate forms of communal existence without the fallback of a shared history or established social controls that might regulate behaviour or bridge differences. Positive stories about the informal screening of new residents, cooperative childcare, or people keeping an eye on their neighbour's house when they are at work are balanced with numerous complaints about loud music late at night, public urination and defecation, and overt drug use.

With Empower Shack, Urban-Think Tank is focused on providing a comprehensive upgrading methodology for South African informal settlements that not only ensures dignified housing and an improved quality of life but



Integrated urban water management and solar feed-in tariff systems are intended to relieve stressed municipal infrastructures (U-TT/ETH)



The Empower Shack base unit has been designed to address a range of size demands and be upgraded incrementally over time (U-TT/ETH)

also stimulates vibrant, community-driven development. Sharing is a fundamental part of this model, and clustering its organising principle. The various forms of commoning that have been built into the project are in one sense dictated by financial realities – whether upfront costs, or the longer-term sustainability issues bound up in maintenance and infrastructure delivery. But in other cases, they are deliberate strategies to leverage the power of collective assets and ensure that architecture and urban design contribute to forces of integration rather than fragmentation. In marginalised communities already dealing with the challenge of deep-rooted inequality and the destabilising effects of circular patterns of internal migration, comprehensive upgrading schemes have the potential to guide a broader process of inclusive development.

Khayelitsha began as a haphazard cluster of pitched tents and empty fields occupied by squatters fleeing violence in Crossroads. Despite the apartheid regime's obsession with territorial control, the origins of many of the informal settlements in Cape Town can be traced back to that segregationist period. Initially, they took the form of bands of overflow development in the buffer strips surrounding townships planned as dormitory suburbs for migrant labourers. After the abandonment of "influx controls" in 1986, which set off a wave of rural-to-urban migration, informal development exploded. In its final throes, the apartheid government hastily established a final series of sites-and-services settlements on the city's periphery, intended as a pressure valve to relieve tensions fuelled by overcrowding, neglect, organised resistance, and conflict between rival "shacklords" jockeying for control. Khayelitsha was one of these rudimentary "toilet towns", and BT Section grew quickly on occupied public land.

Unlike centres of informal development in many countries, because of the particularities of apartheid urbanism as well as post-1994 efforts to deliver vast numbers of state-subsidised dwellings, townships like Khayelitsha now have a patchwork urban character. Though still densely packed and underserved, compressed pockets of self-built shacks are interspersed randomly with multiple generations of social housing. Even within informal settlements, the quality of construction and shack footprints vary massively – mostly based on the length of tenure or whether a household has access to a regular income. One of the original residents of BT Section, for instance, lives in a home that has grown into a mazy 117 square-metre structure but still lacks on-site water and sanitation. Other shacks crowd entire families into a single room and are pieced together from scraps of corrugated zinc, wood, and cardboard atop vinyl floors or threadbare rugs that shift with the sandy surface below.

Steering clear of quick-fix architectural solutions that overlook the complexity of the housing crisis, Empower Shack has adopted an interdisciplinary strategy that brings together architects, engineers, economists, and sociologists. Beyond a new multistorey building prototype, the land readjustment plan is facilitated by a custom-designed digital tool, which allows for the introduction of consolidated common spaces, shared micro-infrastructure, and an urban water management system. By redistributing the existing residential footprint over multiple floors and incentivising the transfer of unused land through a land release credit, the plan also allows for the addition of extra housing stock for rent and sale, recognising the stepping-stone role played by the existing "backyard shack" market and offsetting the initial capital investment. Equally importantly, economic viability is addressed through a micro-finance scheme that encourages household buy-in, as well as a renewable energy pilot that will feature South Africa's first feed-in solar installation.

A unique collaboration with the BT Section community, local NGO Ikhayalami, and associated partners, Empower Shack has adopted an iterative approach that tests and refines a series of constructed prototypes in situ. The first, built to replace the existing home of community leader Phumezo Tsibanto, was in effect an act of guerrilla urbanism. After a workshop in Glarus, a team of four people assembled a simplified design over four days in December 2013. Following a significant period of research and design over the next two years as well as intensive consultation with the community, four adjoining houses based on a new row-house typology were constructed to the south of the main site. The next phase began in July 2017, including the roll out of seventy-two additional units. Once complete, Empower Shack will represent the first informal settlement upgrading project in South Africa to have been achieved with zero displacement.

Many elements of the upgrading methodology rest on a shared approach to neighbourhood resources. At the unit level, the row-house typology is designed around the principle of being "incremental to compliance" from a basic core and shell to an upgraded unit. The shared dividing walls, which are made of block, represent a formal, permanent architecture, which also defines the division of plots in the context of the reorganised urban plan. In contrast, the roof and facades will initially be built with wood frames and corrugated zinc – materials more familiar to self-built shacks. Over time, it is anticipated that incremental improvements by residents will bring their homes up to code compliance. Though part cost-saving measure, the shared block walls will play an even more vital role as a set of firebreaks addressing the serious problem of shack fires. These blazes spread quickly from one home to another, regularly devastating informal settlements nationwide.

On an urban level, units have been reorganised around a central green corridor and large open area. Public space in the settlement is currently limited to narrow, circuitous paths for pedestrian access, punctuated by a handful of small, shared internal courtyards at random junctions. Two to three homes will be positioned on each plot and connected to the main public spaces through shared access areas that extend beyond the private boundary lines of adjacent units. In the "square" itself, a wash station and bench will cater to communal laundry activities while community "kiosks" occupying the public areas of angled plots will be available for commercial or social use. Taken together, these elements reinforce the connectedness of each household and at the same time help define a public-private threshold without fragmenting exterior spaces.

Rear view of the four dwellings built as a pilot for the updated row-house design (Jan Ras/U-TT)

A self-built double-storey shack in Khayelitsha (Daniel Schwartz/U-TT)

A third form of commoning relates to service delivery. The project's solar energy model is based on a system that collectively services a cluster of eight to twelve dwellings sharing a common inverter. The inverter can also communicate to a billing system that would allow phone device SMS billing, Wi-Fi, and satellite television. As a result, the built-in distribution technology caters for the delivery of multiple services to clustered residents and, more importantly, provides shared access to services that individual households might ordinarily be priced out of the market for. The system also demonstrates how collective ownership that aligns with existing social groupings might assist with concerns around theft and maintenance as well as align with other shared amenities like landscaped interstitial spaces. As a latent feed-in tariff system, the inverter technology is set up to generate income through the export of energy once the legislative environment and tariff structures become more favourable.

A fourth, though still unresolved, form of commoning is embedded in ongoing discussions around legal structures. The occupied land where the site is located is owned by the City of Cape Town. Responding to the challenge of "permanent impermanence", the project designs in an accessible pathway to formalisation. The scheme will ensure greater certainty about tenure by issuing accredited fit-for-purpose certificates, encouraging incremental investment by residents to eventually reach building-code compliance. It is envisaged that the legal title to each dwelling will eventually pass to the occupiers in the form of a sectional title. Under this arrangement, the remaining common areas, aside from a new street through the site, would be communally owned and potentially managed and maintained by a community association established as a member-run organisation. A central aim of incorporating collective ownership responsibilities would be to build upon existing social networks and strengthen longer-term commitment to the upgrading process.

Informal settlement upgrading is ultimately just one piece of a larger puzzle when it comes to addressing the challenges

of rapid urbanisation. At the same time, its importance should not be understated. In a context where state housing delivery is manifestly incapable of coping with the scale of need, and extreme economic inequality is being translated into a more "frozen" form of spatial inequality, architects and designers have an urgent role to play in ensuring the built environment contributes to new economic and social possibilities. Pulled by family networks and pushed by the promise of a better life, the BT Section community has found itself disconnected from services and employment opportunities. The home that residents have forged is fragile, marginal, and rife with risks. Despite such deficiencies, though, any "solution" that disregards even nascent forms of mutual support to pursue a poor simulation of middle-class suburbia is no solution at all.

In South Africa, the forced removals and segregation of the apartheid era mean that questions of architecture continue to carry heavy baggage. In the meantime, those facing the interminable wait for a state-subsidised house are locked out of the formal property market due to escalating prices, limited access to financing, and inflexible land regulations complicating private development in the low-income sector. The upgrading of informal settlements has only been an official element of state housing policy since 2004. But despite this shift, the state continues to prioritise formal developments planned and constructed without the involvement of local communities. With Empower Shack, Urban-Think Tank is seeking to influence a new direction for housing policy nationwide. We believe the project offers an upgrading methodology that not only bridges the gap between self-built shacks and the formal housing stock but also supports collective efforts by marginalised urban populations to assert their agency and achieve tenure security.

Members of the BT Section community participated in the construction process for the BT South pilot (Daniel Schwartz/U-TT)

Interviews with BT Section residents

The personal stories accompanying this essay are excerpts from a longer series of interviews conducted by Alexis Kalagas, Michael Waldrep, and Daniel Schwartz with BT Section residents in November 2015 for the Empower Shack project.

Nobuntu Dala

I came here in 1995. When I talked to the people who started the settlement in 1985, after they ran from violence in Crossroads, they said they lived under plastic sheets. I was still in the Eastern Cape then. By the time I arrived, it was all shacks. Where I first stayed with my sister, in 1992, the streets were still sand and the toilets were still buckets. I found it so dark at first. When I went out at night, I felt so scared. It's funny, because in the Eastern Cape, there was also no electricity, but there's still a brightness. Maybe because of the open space. Here it was too cluttered, and I couldn't see the shacks because of the materials used to build them. Where I came from, the rondavels were painted in bright colours, so even at night they caught the moonlight.

On my first day in Khayelitsha, I spent the entire time, from morning to night, sweeping the floor of my sister's shack. She warned, "You're going to get tired; we're living in the sand." When the wind blew and you were cooking, the sand would come in. Your food would be full of it. But now I can see it's getting better. It's getting better because before 1994, the government built some flushing toilets, and then, with the new freedom government, she got electricity. But here in BT Section, electricity was only connected for the first time in October 2012. We'd been using paraffin stoves, which was a problem because shacks would catch fire. Luckily it never happened to me. But I know neighbours who have lost their house two or three times since I've been living here. You could never feel one hundred per cent safe.

Zoliswa Thembani

I came here in 1997. Ten years before, my husband and I had been living in a shack like this one in KTC, Nyanga. We had a nice shop and growing business. But when I was away at work one day, a fire lit by the *witdoeke* burnt it all to the ground. I had nothing! Our money, new stock for the shop, everything was gone. It was terrible – my first child was only nine months old. I was born in Cape Town, because my mother was a domestic servant for a family in Camps Bay. But my husband was from the Eastern Cape, and he wanted to go back to re-establish our lives. There were no jobs for me there, so I returned to school and got my diploma. Eventually my husband and I separated, though, and I left again for Cape Town.

The person who used to live in this house was sick and tired of the city, so he sold it to me. I'd always been asking the people who lived in this area to keep their eyes out for a place for me because I couldn't continue to stay with my brother with a new husband and growing family. I was lucky to find a big place like this, with four rooms and a garden. You'll see on the floor there's nothing, though – it's sandy; they didn't lay cement because I couldn't pay for it. I just put newspaper down and then bought carpet to lay on top because I was in such a hurry to get in. I haven't made any changes since because I didn't have the money. For a long time life was a struggle. But I accept the place where God sent me.

Londa Matomela

When you're new like me, a young person, you notice people looking at you at first. It's like they're asking, "Why did he come here? Is he a good man? Or is he here to give us trouble?" While I was unemployed, I stayed with my parents on the other side of Khayelitsha. But when I got a job, I moved here. I bought the house like this. The walls and roof were from a supplier, and then I put them together. The room is too small, though. I change the arrangement all the time. If I could just get a little more space, then it could be so nice. I'd be so happy. I would separate the front living area and then make a private bedroom. Now, if someone wants to visit me, I always say, "No, don't come. I'll come to you."

My dream was to save money and eventually build a nice house for myself, but it's so difficult to save the money. I've really tried. But in our culture we have so many responsibilities. No matter how much you earn, you have to look after your mother; you have to look after your whole family. I came to Cape Town from the Eastern Cape after I graduated from high school. At the beginning, it was hard to find a job. You have to know someone. If they don't know you, they'll never call you back. The only thing I'm still struggling with in this house is getting my own electricity meter. The community leaders said, "Don't worry, we'll help you," but I'm still waiting. I can pay my neighbour for electricity, but if you don't have your own box, you don't have any control.

Catalysing informal community development after natural disasters / Eefje Hendriks

Eefje Hendriks is an architect working in the field of humanitarian assistance. She is currently pursuing a doctorate and lecturing at the University of Technology in Eindhoven and the Avans University of Applied Science. She has two cum laude master's degrees, in architecture and in building technology. She actively involves students in shelter development for Médicin Sans Frontiers and the Red Crescents, refugee housing inside and outside Europe, and safer post-disaster self-recovery. She has also worked on the urban planning of slum integration in Buenos Aires and in slum upgrading with UN-Habitat. In her PhD research, she focuses on knowledge exchange to support safer self-recovery after natural disasters. Therefore, she does field research in places such as post-hurricane Nicaragua, post-flood Senegal, and post-typhoon Philippines together with different NGOs. The research outcomes can be used by NGOs to guide basically educated, low-income disaster survivors in their recovery process, enabling increased self-reliance.

Architect or policy maker?

The Dutch have a saying, "God made the earth, but the Dutch made the Netherlands." Yes, I come from the Netherlands, a country with a quarter of our land below sea level and where every square metre has been carefully planned by one government agency or another. This is the result of fighting a centuries-long battle to reclaim land from the sea through an intricate system of dikes, canals, and pumps. Through fighting this battle, formality and *long-term planning* in the Netherlands has become an institutionalised response to the constant threat of the sea.

What do I know about informal settlements? Although I am proud of the liveability of my small country, with its dense urban network of small cities well connected by excellent public transport and with the countryside always within a half-hour bike ride, I lack excitement for the over-regulated public space. Against all odds, I became intrigued by problems related to *informal settlements* through my work experience in Buenos Aires in 2011, where I worked on *urban planning, slum integration, and slum upgrading*. Experiencing the chaos of informal settlements was an eye-opening experience for me and marked a stark contrast with the well-regulated Dutch landscapes that I have grown up with.

Slum upgrading in Buenos Aires (Eefje Hendriks)

I would love to have a bit of chaos in our cities, where inhabitants would grab opportunities to use leftover spaces to make them their own. Initiatives that you commonly find in *informal settlements* or, in some cases, to a certain extent, that pop up in Dutch cities. It fascinates me when inhabitants *take control* over their built environment with structures that most Dutch architects and designers have unlearned to desire. Luckily, in the Dutch discourse of *city making*, the active involvement of inhabitants has become a priority on the agenda. It is those pop-up solutions in empty industrial buildings or wastelands, built with a high degree of reused materials, that have become an essential part of the popular *hipster movement* in the Netherlands. You almost can't have a popular bar without at least reclaiming old school chairs and having tables made out of scrap wood. The hipster movement exemplifies the growing involvement of the users in not only the furniture but also the infill, building, tissue, and urban street level, which has been described as essential for city making by professor John Habraken (Habraken 2003). The Dutch now embrace this type of organised chaos in our cities, but how does our perspective inform the development of informal settlements in rapidly growing cities around the world?

Many architects strive to become a *starchitect*, bringing impressive and carefully designed buildings into our built environment. Although it is incredibly exciting to have drawings and models come to life in real scale within our daily environment, it now feels *meaningless* to me to invest time towards building an environment that is already close to perfect. Why design breath-taking luxury buildings when some do not even have a basic roof over their head? Is that not the essential preoccupation and *responsibility* of a building engineer?

After a day of constructing houses in the slums of Buenos Aires, Argentina, I was overwhelmed by the abundance of delicious food we had on our dinner table in our *luxury* apartment, made by our friends from all around the world. Being aware that the families we had worked for, so close to our home, did not have enough made me and my roommate feel guilty. I felt guilty in having so many opportunities to develop myself compared to those living in the *periphery of the city*. Getting to know the families personally and living in the same city evoked more intense feelings than studying the slums in Mexico City for two weeks with my university. At that dinner, I became convinced that I would dedicate my privileged position to create opportunities for others. Because of my strong belief in contributing, I was at first amazed by the heated debate about the slums and its *social, economic, and political complexity*, not common in Western Europe. Despite all of our hard work, with elections coming up in Argentina the slum conditions remained unchanged. Politicians were struggling to find solutions that were acceptable to both the large number of slum dwellers living on illegal grounds and the wealthy and powerful tax-paying inhabitants. If I would want to contribute to better *living circumstances in the slums*, I would also have to be involved in *politics and policy making* and come with strategic solutions that fit the often contradictory needs of *stakeholders*. Architects and urban planners should always consider the right to the city (Lefebvre 1996) and how all urban actors can be involved in planning the city. In this article, I will take you on a journey around to world in a quest to contribute with architectural knowledge to the housing solutions of low-income groups, mainly living in informal settlements.

Where disasters create informal settlements

While studying to become an architect, I became fascinated by the problems that occur when *rapidly growing cities* with their informal settlements have to cope with natural disasters. Haiti has a broad history of recurring natural disasters, such as tropical storms, floods, and earthquakes, and is therefore in a constant state of rebuilding and development. The Haitian government has been poorly prepared for natural disasters. Since Haiti's independence in 1803, the political situation has been a mess, partly because of a large French colonial debt, plenty of coups, and some ruthless dictators. Already before the

earthquake in 2010, the very unstable Haitian government had to cope with *social inequality* partly due to the *rapid population growth* and the *lack of affordable living spaces* for the poor. Haiti was, and still is, one of the poorest countries in the world. Because of limited financial resources, the initiatives of slum dwellers to build their own houses were inevitable necessities to provide for the *lack of affordable housing*.

Just after the earthquake in Haiti in 2010, people found temporary shelter in the large city parks and voids, after having lost their homes and family members. *Informal tent camps rapidly and spontaneously* emerged all over the Haitian capital of Port-au-Prince. In these camps, new social relationships were made, and little by little, by people who were starting to rebuild their lives. A substantial amount of disaster survivors hesitated to move back to their former homes. Among other reasons, they feared the *unsafe construction*, the voodoo in Haitian culture implying beliefs of ghosts wandering around houses, or simply because there was nothing left to go back to or no money to rebuild with. So, people survived with what the camps had to offer, even though these internally displaced people lived in *hazardous living conditions* in an *uncertain, volatile, and precarious situation*. The tent camps in Port-au-Prince were especially known for their poor conditions for women and children, as they feared molestation, rape, and human trafficking.

Self-recovery transforming emergency tent camps into permanent settlements

Over time, some tent camps, such as Villa Rosa in Port-au-Prince, slowly turned back into the permanent informal settlement with *low quality* dwellings from before the earthquake. Villa Rosa was located on a hillside overlooking the city with a densely populated urban fabric of narrow streets. It was heavily hit by an earthquake, and a third of the houses were destroyed beyond repair. Efforts of NGOs, among others, willing to provide assistance were staggered because of land tenure, a complex and time-consuming risk assessment of the area, and the indecisive government in providing a formal reconstruction proposal. Unfortunately, because of the absence of engineers supporting the owner-driven reconstruction, the new houses were still lacking earthquake- and hurricane-resistant construction techniques and were built on a steep hillside with an irregular composition of soil endangering them to landslides. The shanty town Villa Rosa slowly returned to the same state as before the earthquake, and in 2015, almost five years after the earthquake, Villa Rosa had become a developed informal settlement, with even concrete houses, albeit still partly evicted.

Although an incredible amount of NGOs had been involved in the recovery of Haiti, people were still living in makeshift housing in former tent camps for years. Such transformations of tent camps are not exclusively seen in Haiti but occur worldwide where a disaster strikes in *low-income countries* with *highly dense urban areas*, where *adequate alternatives* are insufficiently provided by the government or NGOs.

Commonly, the permanency of tent camps is seen as a treat rather than as a solution for *low-income groups*. The treat is found in the little strategic and hazardous site selection and the extremely poor living conditions. It sounds cruel, but was it in some cases not also a good sign that people took fate into their own hands? Do we not want to build our cities with its inhabitants? Especially in a post-disaster situation as in Haiti, where everything was destroyed and the government lacked the financial means to provide alternatives, the initiative of inhabitants should be appreciated. These settlements can also be regarded as an expression of *active citizen engagement* and an opportunity for new city development, which could lead to more self-reliance. Their involvement gives a *notion of creativity and socially and culturally embedded city making* processes. Could we support their initiative with guidance in *resilient city making*? Does the *top-down* organisation of city making usually lead to more liveable cities than being driven by *bottom-up initiatives*?

I was surprised by the fact that new neighbourhoods were constructed by NGOs in the *outskirts* of Port-au-Prince, like in camp Corail-Cesselesse, without affordable access to economic activity in the city. These groups in particular need the *proximity of the city* to provide their livelihood. I questioned the impact of this exclusion on the self-reliance of these inhabitants and decided to propose an *alternative strategy* for the informal tent camps of Port-au-Prince. What if we could support the tent camps in becoming part of the city, in parallel do what we did in Buenos Aires, Argentina?

What if self-recovery is supported?

Especially in academic institutions, we have the opportunity to propose innovative forms of *democracy in the city* and alternative approaches. I graduated on the cross field of urban regeneration and the provision of emergency relief that can stimulate community development. Therefore, I carried out an in-depth study into the phenomenon of bottom-up initiatives in informal tented camps. Commonly, emergency aid is given in these camps, in the form of an emergency building for community purposes that is later taken away. The main reason is that the tent camps are not supposed to become permanent and because donor money is often allocated for emergency relief only. However, in such a devastated built environment, it is crucial to enable the long-term use of buildings through hazard-resistant structures and multifunctional design. Therefore, emergency aid should be combined with rebuilding activities, an approach which increasingly has the interest of humanitarian organisations because of *diminishing economic resources* and *increasingly critical donors*.

Catalysing informal city development

I developed a rapid deployable structure that transforms from an emergency health post to a community centre with a school, market, and area to shelter women. The structure was meant to catalyse the development of the surrounding tent camps by offering facilities that corresponded to the phases of recovery. The project is an example of a way in which a community building can stimulate the *transformation* of the tent camps into a full-fledged part of the city.

My graduation project, supported by the Eindhoven University of Technology, defined boundary conditions for a community building in a tent camp in Port-au-Prince, which stimulated the *transition from emergency aid to rebuilding activities* and supported the changing demands for the development of the community. The whole structure was designed to withstand earthquakes, hurricanes, and floods. The transition was enabled by a demountable, flexible, and locally upgradable structure with fast and easy connections between columns and beams suitable to make a variety of assemblies. A relatively small emergency health post was transformed into a school around a patio, to educate the young

Temporary tent camps transform into low-quality informal settlements when assistance is lacking (illustration Eefje Hendriks)

population, over 50 per cent of which were under twenty years old. The patio enabled sufficient ventilation, and spaces were covered from direct sunlight to create comfort in the tropical savannah climate. To empower the women, an open market area fully controlled by women stimulated economic development. Next to that, women in danger of sexual harassment or violence were sheltered in the most private and safe part of the community building. Degrees of ownership are created with in-between zones separating and linking the protected space from the more public domain.

You don't know anything

Although from an architectural perspective the community building might have been well designed with strong arguments related to the spatial boundary conditions, the project was far from realistic. Land tenure was a big legal limitation in the transformation of tent camps into neighbourhoods. An alternative approach needs to coincide with governmental and humanitarian policies to get it accepted. To enable such transformation, time-consuming and intensive negotiation would be needed with governmental and humanitarian agencies and inhabitants. Therefore, the architect has to understand those policies and investigate procedures to introduce innovations.

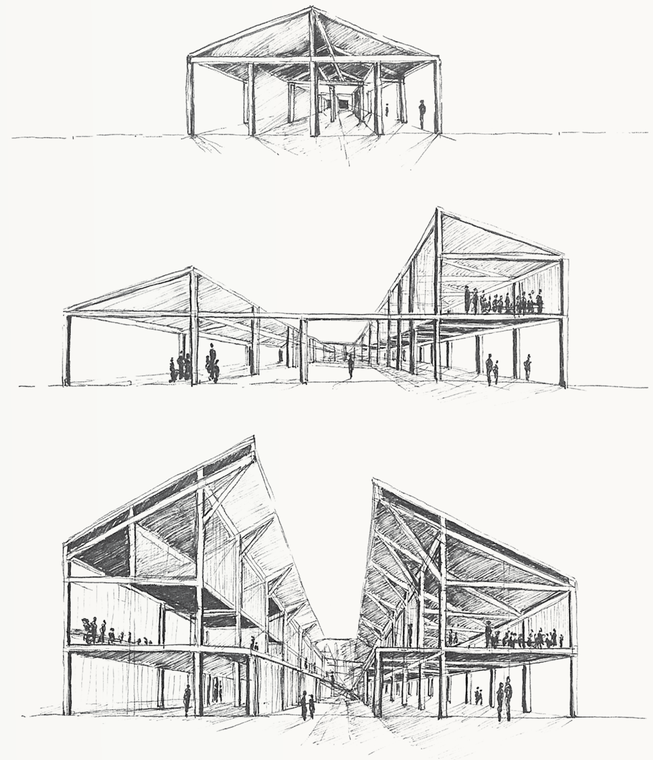
Because of the rather controversial character of my proposal in 2012, I interviewed a number of practitioners from different NGOs and Haitians in the Netherlands to confirm and improve the concept and final design. A Haitian lady, also present at my master's degree defence, highlighted that according to voodoo beliefs, this building would not be accepted by the people because evil spirits could enter through the opening in the patio. This project taught me that there are aspects that we are not even aware of, so we don't consider them. A social anthropologist, one of my experts provided me with a distinct view on the social tensions in the tent camps. I am convinced that this *perspective* was not better or worse than others but just that we all have a piece of information and do not always see the whole picture. The limitations of architecture practice can only be overcome by working together with other disciplines with different perspectives and experiences.

Communicating guidelines for hazard resistance

On the isolated east coast of Nicaragua, in the city of Puerto Cabezas, the practical limitation of constructing a hazard-resistant school became apparent to me after my studies. In a situation where people had barely enough money to feed their family or buy shoes so that the children would be allowed to attend classes, we constructed a well-designed, durable, and hazard-resistant concrete school together with the community. Although people were pleased with the final result, they still had limited knowledge about how to secure their own wooden house from hurricanes despite their eagerness to learn—above all, because the used materials for the school were far too expensive for their own housing. We mainly *shared knowledge and skills* on how to construct a decent concrete structure in which their children could go to school. Some reached a level to become professional construction workers probably able to find a job in construction after our project. However, for most of them, the knowledge we shared was too complicated for them to grasp its value and apply it independently. Although they were not used to communicating on paper and were often not able to read, write, or count, we communicated knowledge through booklets in step-by-step 3D abstraction. There was definitely an opportunity to enlarge the effectiveness of our knowledge exchange so that the local volunteers could apply it in their personal situation.

Are you sure?

Having most of my peers working passionately as architects, I struggled to let go of the opportunity to become what I was educated for. I had to be sure of what I was letting go and chose to work again for an architecture office directly after working in Nicaragua. The incredibly talented group of young architects from all over the world was inspiring to work with, and most of them became good friends. However,



Conceptual drawing of the transformation of an emergency health post into a community centre, which catalyses community development (Eefje Hendriks)

designing a luxury spa resort in the mountains of Switzerland made me realise I missed the contribution to the lives of those who need it most. It reminded me of people in informal settlements in Buenos Aires and those in Nicaragua that I might be able to assist with my knowledge.

Improved emergency shelter

Through the Eindhoven University of Technology, I continued developing improved shelter solutions together with different humanitarian organisations. I had learnt that to make a difference in the humanitarian sector, one has to fully understand its complex organisation with its practices and all its current limitations. Most emergency shelters are deployed around the world without adapting them to local climate conditions. At the university, we developed a large rapid deployable context-sensitive multipurpose shelter. It could be customised to the function, size, and height needed but especially to extreme climate conditions such as extreme wind loads, snow loads, and sun radiation. With an exceptional guaranteed lifetime of at least ten years, this innovative shelter provided a bridge between emergency and permanent use. After testing the assembly of the shelter numerous times in the Netherlands, Belgium, and even in Senegal, we made improvements to ensure an instinctive assembly method with simple connections.

The field test in Senegal left a deep impression on me. With floods returning every year on the riverbanks in the north that forced people to rebuild their houses and long dry months that made farmers travel long distances to feed their cattle, the impact of climate change was visible in Senegal. This made the place hostile for future perspectives. Many travelled west to find a better life in Cape Verde on a dangerous boat trip. The place gave ambiguous thoughts about supporting people in their dangerous journey or supporting others to stay in such a hostile climate. With our shelter we intended to help both. Although you can find convincing arguments for any kind of assistance, in the end the people decide what conditions are acceptable to them. Therefore, I strongly perceived the necessity to both shelter climate refugees in less hostile climates and invest in measures to prevent climate change worsening.

I also experienced a dilemma during our field research. I am convinced field tests are necessary to verify the quality of a new product, as with all product development. It requires investment in research to make a suitable product. Because research funding is lacking in humanitarian assistance, there is a lack of profoundly tested emergency shelters optimised for different situations. In a lot of emergency or conflict situations, local construction methods take too long or are can be too permanent for host countries or temporary sites. Probably, there will always remain a need for temporary emergency sheltering. However, the involved costs of high-quality shelter design feel hard to endorse when compared with the construction cost of local housing. Nevertheless, the contribution to improved emergency shelter could somewhat justify the costs made.

The collaboration with different humanitarian organisations also made me aware of the struggles to get innovative solutions accepted. Although we worked closely together with some of the organisations in the product's development, it was difficult and complex to get the shelter types accepted in catalogues from which field officers would be able to order. It is mainly hard to find a competing price for new designs. Those humanitarian organisations with a long history have many protocols for surely valid reasons. Nevertheless, grassroots organisations or less centrally organised NGOs with more flexible funding appear to have more opportunities to experiment and innovate.

Constructing a hazard-resistant school in Puerto Cabezas (Eefje Hendriks)

Recognition of self-recovery

In my current doctoral research, I am considering the role of self-recovery after a natural disaster. Natural hazards are increasingly affecting populations. Contrary to what might be expected, less than 15 per cent of the affected population worldwide are sheltered by humanitarian organisations in planned and managed areas (Parrack/Flinn/Passey 2014). This leaves the vast majority, the remaining 85 per cent, to improvise their own shelter (Saunders 2016; Parrack et al. 2014). Last year's estimates present that the humanitarian sector is only able to cover a quarter of the shelter demand (Development Initiatives 2015). This raises questions about current humanitarian practice. Principally, would it be possible to assist the majority with alternative approaches?

Expert interviews for my PhD research showed that the role of self-recovery is rarely integrated in recovery strategies by humanitarian practitioners in the Netherlands. Many of the affected people have no other choice than that of self-recovery. There is actually very little documented about those that are left without assistance. However, most NGOs do consider the impact of their assistance on the long-term self-reliance of the affected people. Some experiment with methods that serve disaster survivors with minimal predefined solutions – for example, through cash transfer – to protect their authority in decision making. These NGOs want to learn more about the group of disaster survivors that self-recover.

Unfortunately, humanitarian organisations have a strong dependency on donor money, often allocated to a specific quantity of shelter units for a specific price and quality. Donors should be open to consider the impact of supporting a larger group in constructing "safer" units instead of supporting a minority in constructing certified, often temporary shelters. To convince donors of alternative strategies, *evidence-based research* and *proven examples of better practice* are needed. It is necessary to investigate the needs in self-recovery processes and analyse the awareness of guidelines to build back better and improve the safety of their current structures. This research would enable us to reflect on the way we give aid. How can we support low-income and basically educated disaster survivors in constructing their own hazard-resistant home themselves?

Knowledge exchange as the key to resilience

In the Philippines, I found out that to support the adoption of hazard-resistant construction principles, effective communication by those that have the information with local carpenters and households is often lacking. Local carpenters and households are mostly not aware of how to construct typhoon-resistant shelters or where to find this information. If they find it, there are not always able to understand the documentation provided because some of them are not able to read or write. This is in line with prior research that has indicated that most of the available knowledge-based interventions to communicate hazard-resistant construction principles would not have a lasting effect on community resilience (Spiekermann/Kienberger/Norton 2015). Often, interventions are insufficiently adapted to local conditions, each with their own communication habits and construction skills. Currently available interventions tend to transfer knowledge one-way instead of exchanging knowledge reciprocally between the humanitarian actors and the local community. This hinders the local adoption of new knowledge. Knowledge exchange, as opposed to one-way transfer, is a two-way negotiable sequence of knowledge transfers between actors and leads to a better consensus of ideas and therefore a stronger adoption of knowledge within communities. In the Philippines, I found that those who understand how to build typhoon-resistant shelters lack the financial means to apply it and need more affordable alternatives, which can only be developed in a two-way conversation with experts. Therefore, in my research, I consider knowledge exchange as a communication process instead of knowledge transfer.

As highlighted in the beginning, architects need to explore and understand the context they are working in. This was a story of my journey in exploring and understanding the context of informal settlements in relation to natural disasters. I have noticed that it is not new architecture designs that are most needed in post-disaster situations, nor is it the development of technical knowledge. Rather, it is better ways of communicating this knowledge. I believe that effective two-way communication is key for enabling locals to help themselves and each other.

Development Initiatives (2015): *Global Humanitarian Assistance Report 2015*. URL: http://www.globalhumanitarianassistance.org/wp-content/uploads/2015/06/GHA-Report-2015_-Interactive_Online.pdf (accessed 24 May 2016).

John N. Habraken (2003): *The Uses of Levels. Open House International*. URL: http://www.habraken.com/html/downloads/the_uses_of_levels.pdf (accessed 29 January 2016).

Henri Lefebvre/Eleonore Kofman/Elizabeth Lebas (1996): *Writings on Cities*. URL: http://doc1.lbfl.li/aao/FLMF015115.pdf (accessed 27 July 2017).

Charles Parrack/Bill Flinn/Megan Passey (2014): *Getting the Message Across for Safer Self-Recovery in Post-Disaster Shelter. Open House International*. URL: https://radar.brookes.ac.uk/radar/items/b0bd437a-4aec-4849-a849-fb3f8fc2f0ce/1/parrack2014message.pdf (accessed 20 December 2016).

Graham Saunders (2016): *Need for Innovation in Sheltering*. URL: https://issuu.com/shelterresearchunit (accessed 1 June 2017).

Raphael Spiekermann/Stefan Kienberger/John Norton (2015): "The Disaster-Knowledge Matrix. Reframing and Evaluating the Knowledge Challenges in Disaster Risk Reduction", in: *International Journal of Disaster Risk Reduction*, 13, pp. 96–108. URL: http://www.sciencedirect.com/science/article/pii/S2212420915300091 (accessed 21 July 2016).

Housing the Urban Poor in India – An Approach with Promise / Kirtee Shah

Kirtee Shah is the founder-director of the Ahmedabad Study Action Group (ASAG), an NGO he set up with other like-minded colleagues and has led for the past forty-five years. He was the president of Habitat International Coalition (HIC) for a decade in the mid 1990s; founder-president of Habitat Forum (INHAF); founder-chairman of Home Losers' Service Association of Ahmedabad (HOLSAA); president of the Bangalore-based Institute for Cultural Research and Action (ICRA) for the past thirty years; one of the founders of Ashoka Innovator for the Public, which now has a presence in more than ninety countries; a member of the National Commission of Urbanisation (NCU) set up by the then prime minister of India in the mid 1980s; the chair of a committee on urban poverty for NCU; and is currently engaged in promoting a national level Cities for the People platform with many others which, among other things, hopes to develop a Civil Society Think Tank on India's Urban Challenge (Cisott). He is also involved in the institutional development activities of Citynet and the Asian Coalition for Housing Rights (ACHR). Besides studies, field projects, organisation development, and policy-related work in rural, urban, and tribal housing for the low income and other disadvantaged groups, he has worked extensively on large-scale post-disaster reconstruction projects in India and abroad. He is chairman and chief architect of KSA Design Planning Services Pvt Ltd., an Ahmedabad-based firm of practicing architects with projects in various parts of the country and outside.

Channelling the urbanisation process and managing the growth and development of Indian cities in a manner that ensures equal opportunity to all citizens; addresses issues of poverty, inequality, and employment effectively; preserves the environment and environmental resources; respects ecology; balances modernity with tradition; puts technological advances to creative use; protects cultural heritage and social diversity; preserves human values; and nurtures new norms of a democratic, participatory, equitable, and just society is undoubtedly one of the most demanding development challenges facing India today. The challenge is not only in ensuring an adequate livelihood and income, reasonable shelter and living environments, physical infrastructure, social services, and opportunities to grow and prosper for over 65 million inhabitants living in the city slums and other forms of marginal existence at present but also in the preparation for the 250 million more who in three decades will be in the cities, many of which are already bursting at the seams. It is also not only about maintaining the higher growth rate in the region of 8–9 per cent, some 65 per cent of which is produced in the urban sector, or managing the resource crunch, or keeping the investment and development balance correct between the rural and the urban. Inclusive and sustainable growth, participatory development, and related planning and governance challenges are formidable too.

Slums

One of the most visible and difficult problems that the fast-growing Indian cities face is the growing number of people in the slums and their living conditions. Though not a representative case, nothing highlights the slum problem more eloquently than Mumbai, where more than half of its over 16 million people live in unhealthy and, in many ways, deplorable living conditions. Mumbai's case is particularly interesting as it is the wealth capital of India. Per capita income is much higher than the national income (US$7,050 in 2009–2010, almost five times the national per capita income of US$1,500 in 2013), and the municipal budget is in the region of Rs.37,000 crore (US$60 billion). Mumbai boasts an efficient transportation system that carries some 8 million passengers a day and has the highest property and land prices in the world. Considering its engine of economic growth status and the modern Indian city tag, the need to make it productive, efficient, and attractive (for local and international investment) is high. Despite such resources, incentives, and compulsions and despite a number of initiatives in the form of policies and projects over the years to tackle the slum problem (from the much talked about Dharavi Redevelopment Project to the Slum Rehabilitation Authority (SRA) to the political promises to house all slum dwellers in formal housing to environmental improvement of slums, and so forth), if 8 million people are still in slums and if it remains one of the most difficult problems facing the planners, politicians, and administrators of the city and the state (Mumbai is the capital city of Maharashtra Province, one of the most urbanised and industrialised provinces of India), it speaks volume about the complexity of the matter and what it needs to handle it effectively. It is true that Mumbai's case is special. But so is its status with its manpower skills, financial capability, and institutional capacity.

In search of workable approaches and solutions

India is probably one of the most proactive countries in search of workable, viable, acceptable, affordable, and sustainable solutions to the urban slum problem. Over the years, many options and approaches, starting with the state-provided, fully subsidised formal houses for the industrial workers to sites and services, environmental improvement, in-situ slum upgrading, and a promise of cities without slums with property rights for the slum dwellers have been tried out with mixed results. Involuntary evictions of unauthorised settlements continue to vacate the lands required for public projects or private real-estate development. However, judicial activism, civil society pressures, pressures of grassroots movements, political considerations and compulsions, a relatively progressive legal framework that accounts for human rights, and so on are reducing the incidence of evictions, and relocation with workable and acceptable site options are slowly gaining ground.

Though a range of options to tackle slums has been explored over the years, it is clear that the option with greater political approval and demand is in the form of projects to construct small houses in multistorey apartments. This approach to constructing formal, contractor-built, almost fully subsidised houses, however, has major limitations in addressing the problem of numbers and quality, with a resource crunch, the high value of urban land in prime locations, reluctance on the part of the slum dwellers to shift away from their place of work and social networks, limited construction capacity of the construction agencies, and affordability limitations on the part of both the subsidising state and the (part cost) paying end users. The need to optimise the (expensive) land use and achieve higher density requires building multistorey apartment buildings, which severely constrains cost reduction, a necessity for the low-income customers.

It is against that background that this slum-development project, designed and implemented some forty years ago in the mid 1970s in Ahmedabad, one of the first ten most populous and fast growing cities of the country, is presented here. Despite the changed scenario and context, the project remains relevant even today for its vision, people-centric approach, creative partnership pattern, and, more than anything else, the learning workable model it offers to the Indian cities trying to tackle the slum problem.

The Vasna project: Sankalitnagar at Vasna, Ahmedabad

Here is the project story.

The Sabarmati River, on the banks of which Mahatma Gandhi set up his famous Ashram and which has acquired a new national identity through the Sabarmati Riverfront Development Project, flows through the heart of Ahmedabad, an industrial and commercial city of over 5.5 million people today, and about 3 million people when the project was conceived. For a large part of the year, the river was an alluvial tract, a veritable dust bowl. It came to life for a short time during the monsoon. But it soon drained dry. For the people of Ahmedabad, the first gush of water flowing in the river was literally a festival.

The last day of August 1973 was different. The usually calm, quiet, and lethargic river rose in a devastating fury and wrought unprecedented havoc. Submerging her normally safe banks, the floodwaters entered the narrow lanes of the city. A number of houses collapsed. After three or four days, when the waters finally receded, the roads were buried under a one-metre layer of mud, and a foul stench of rotting corn and animal corpses filled the air. The worst sufferers of this natural calamity, as always, were the poor. Some 3,000 families living in slums on the riverbanks or in the riverbed itself were badly affected.

The Sabarmati River flood, 1973 (ASAG / Kirtee Shah)

They lost their ramshackle, tin-sheet roofed, and mud and gunny bag-walled huts to the fury of the floods. Some lost their belongings, a few lost cattle, and at least three families lost their children. Frightened, they rushed to wherever they could find an empty space. They landed on footpaths, occupied school buildings, took shelter under the verandahs of public hospitals, or camped in huts of distant relatives and friends in other slum pockets of the city. The authorities rushed through instant dole. The city's health service inoculated people day and night to combat the health hazards. Voluntary agencies responded with food packets, clothes, medicines, and other necessities of daily life. The city's slum problem surfaced dramatically and prompted the concerned authorities to think about solutions.

ASAG's advocacy

While the Ahmedabad Municipal Corporation (AMC) was engaged in the task of providing emergency relief and settling a few flood-affected families in the transit camps, Ahmedabad Study Action Group (ASAG, a NGO started and run by young professionals to use their professional skills for developmental action in support of the poor and other marginalised people and deprived groups to improve their conditions of living), based on its earlier experience and a quick assessment of the flood victims' concerns and views, emphasised the following points in a letter addressed to the Ahmedabad Municipal Commissioner:

- The flood had caused a fear psychosis among the river-bank slum dwellers and made them realise that habitation on the river was no longer safe. If a viable, affordable, and acceptable alternative was offered, they would consider shifting voluntarily. It was pointed out that the earlier efforts to relocate them had met with resistance as the communities were either forcibly driven out or offered accommodation at a price and a location they could neither afford nor accept.
- For a successful relocation exercise, involvement of the flood-affected communities, at many stages in the process, was essential. It was argued that previous attempts to relocate these communities had failed as decisions were imposed from the top without consulting the people.
- "Slums are people not places", ASAG emphasised. A slum reflected an attitude to life as much as it did the quality of the physical environment. It was not simply a housing problem but a complex socio-economic, cultural, and political one. ASAG advocated that a comprehensive approach which incorporated social, economic, educational, and motivational input along with housing would lead to far-reaching attitudinal and behavioural changes, and even a new value system. ASAG suggested that for the flood-ravaged slum communities not merely a housing project but a comprehensive development programme was needed.

Partnership

AMC decided to adopt the broad-based development strategy outlined by ASAG in its proposal. The Government of Gujarat, as part of its flood rehabilitation policy, agreed to allocate a 43-acre site, 7 kilometres from the centre of the city, together with a subsidy of Rs.700 per family. Oxfam, a British development aid agency, emphasising the "development perspective" outlined by ASAG, agreed to contribute Rs.400 per house and an additional grant to support a "social action component". Though the site was outside its jurisdiction, AMC in an unprecedented gesture agreed to provide the infrastructure services, including piped water, sewerage, street lights, roads, and social amenities, such as a kindergarten, school, shops, and a community centre. The Housing and Urban Development Corporation (HUDCO) approved a low-interest, easy instalment loan to be repaid by the families over a period of twenty years. And a large majority of the affected slum dwellers, after weighing up the short- and long-term implications of the move, indicated their willingness to shift.

The people

In order to draw a profile of the community, a household survey was conducted immediately after the floods. The data revealed that the affected families were living in twenty independent, unauthorised clusters on the encroached lands on the riverbanks.

Community centre (ASAG / Kirtee Shah)

The average family size was small, 4.6 persons, as opposed to the average city slum family size of 5.2. The two predominant religious groups were nearly equally represented: 44 per cent Muslim and 54 per cent Hindu (percentage of Muslims and Hindus for the entire city was 15 and 83 respectively). In 21 per cent of the households, the principal earners were hawkers, traders, and vendors, 19 per cent were casual labourers, 13 per cent office workers, 11 per cent transport workers, 11 per cent factory workers, 8 per cent unemployed, 5 per cent domestic workers, 2 per cent construction workers, 2 per cent entertainers, and 1 per cent beggars. Approximately 23 per cent of the households earned Rs.75–150 per month. Another 23 per cent earned Rs.150–225, and 20 per cent earned Rs.225–300. The housing conditions in these slums were depressing. Out of 1,475 families who were studied in the first survey, 5 per cent lived in shacks measuring less than 5 square metres, 60 per cent of them occupied 5 to 15 square metres of land, 18 per cent occupied 15–25 square metres of ground area, and only 1 per cent lived on land plots larger than 35 square metres. Of these houses, 23 per cent were made of gunny bags, plastic, and canvas, 26 per cent of them had mud walls, 7 per cent had walls of unbaked bricks, 6 per cent had no walls at all, and 2 per cent were without any protection whatsoever.

Approach

The development approach proposed by ASAG necessitated two mutually complimentary streams of activities. One related to physical infrastructure for living, which was to be provided through the construction of a township on the city outskirts for about 13,000 people who had previously lived in unhygienic slums. Improving their quality of life meant providing adequate houses with services such as a toilet, water supply, drainage, street lights, and roads as well as social amenities such as a primary school, health unit, shops, community hall, and so forth. Equally important was the social side, the community development work, which would enable them to construct a new personal life and a cooperative community life.

Physical infrastructure

The reference frame and the guiding principles, which eventually determined the cost and the design of houses and the site layout, were based on conclusions drawn from three sources. Largely negative inferences, in terms of what not to do, were based on feedback from the earlier slum clearance and other social housing projects implemented by public housing agencies in different parts of the country. Other inferences were drawn from ASAG's previous housing projects. Feedback on size, space division, materials used, community interaction, extensions and alterations, loan recovery, and so on provided useful lessons. However, the most important factors determining the design and cost of the houses and the layout pattern were income and affordability limit and the needs felt and articulated by the riverbank slum communities.

Finance

Through numerous meetings in the community and discussions with their leaders, alternative housing strategies were developed by the trained community workers and ASAG architects. Three options emerged: to construct individually using only the available flood relief subsidy on the site allotted by the government, to add personal savings to the state subsidy to build on the sites-and-services principle, or to build formal, regular houses by obtaining a group loan and organising a collective housing project.

An overwhelming number chose the third option. They wanted completed houses, not serviced plots. They argued that by spending a little more money, they would be able to build permanent houses rather than temporary shelters. However, on their own, without any flood relief subsidy, they had no capacity to invest or to repay the borrowed capital that would be needed. They believed that this was an opportunity to invest in their future, and they did not want to squander the chance. Not many had savings. Only 27 per cent of the initial 1,475 families surveyed had saved between Rs.150 and 300. A detailed inquiry through personal discussions, group interviews, and surveys revealed that a large majority of them were willing to and capable of spending, in rent or loan repayment

What makes the Vasna project worth revisiting despite its four decades?

The Vasana project is about forty years old by now. Yet some of its features, in the context of the modern social housing projects for the low-income groups, remain special. Here is a list.

1. A case of reverse participation. An NGO idea, in its articulation, conceptualisation, and design, was picked up by the Ahmedabad Municipal Corporation and the Government of Gujarat for implementation. Though funding, legal authority, and implementation responsibility remained with AMC, the spirit of wider "ownership" that the NGO brought remained intact until completion.

2. Not houses but people or the community remained at the centre of the entire exercise – be that selection of the site, design of the houses, site layout, size and cost of the house unit, or ground- or multistorey construction.

3. The PPP model. In fact, it is PPPP (Public Private People Partnership).

4. The early application of the partnership principle, in resource mobilisation, each according to its domain strength. The Government of Gujarat contributed a 43-acre site. Ahmedabad Municipal Corporation provided basic services. The social action component was funded by Oxfam.

5. The NGO's role. ASAG assumed all responsibilities, including advocacy and direction setting, community studies and interactions, participatory design, construction supervision, moving families from different slum pockets to a temporary neighbourhood near the site to facilitate their involvement in construction, neighbour choice process, and the post-construction community development work for five years after settlement.

6. The self-help principle. The community borrowed money from HUDCO to pay for its share of the construction cost despite being a flood rehabilitation project (normally fully subsidised by the government).

7. Genuine low cost. This was arrived at jointly through participatory design, input by professional construction experts, and strict cost control during construction.

8. Detailed community consultations at the family, immediate neighbour, and neighbourhood level in preparing house designs and site plans with the creative use of scaled wooden models. People rejected straight-line road patterns and selected overlapping courtyard configurations. AMC's suggestion to build multistorey houses was also rejected, as was a site plan option, which gave more land for the individual unit, favouring the community courtyard option.

9. Voluntary choice in displacement. Though it was a case of displacement housing (families living in over nineteen slum clusters on both sides of the river relocated to a single site), not a single family was moved forcibly. To move or not to move was a voluntary choice of the family. Each family was asked to make an educated decision weighing up the pluses and minuses. Those who did not agree to move were allowed to stay in a corner of the vacated site.

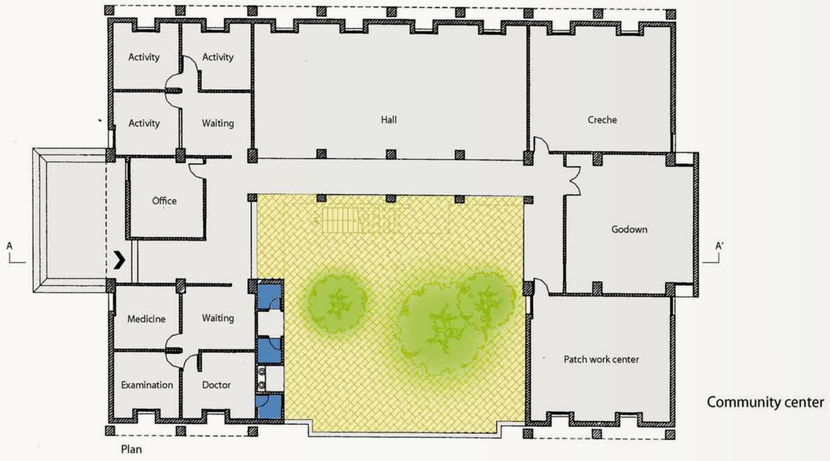
10. Innovative management structure. This happened through the formation of an autonomous and empowered project committee and innovative project implementation structure that gave a role to all partners in decision making and eliminated the possibility of bureaucratic delay or political interference (it was a municipal project and such delays and interference are the norm). An autonomous project committee, with all contributing project partners as members, was created by AMC. The entire implementation responsibility remained with the committee. The municipal commissioner was the chairman, and the NGO director in charge of the project (myself) was the secretary of the project committee. All decision making remained with them with the provision of rectification in the next project committee meetings, which were held regularly every month. The arrangement accounted for speedy and hassle-free implementation without any cost escalation.

11. Finance management. The unique part of the working of the project committee was its finance management structure and operative arrangement. All project funds were deposited in the project committee account. The account was operated jointly by the president (municipal commissioner) and the secretary (NGO head and project director). It authorised an outsider, an NGO person, to handle the government funds. This is unheard of normally.

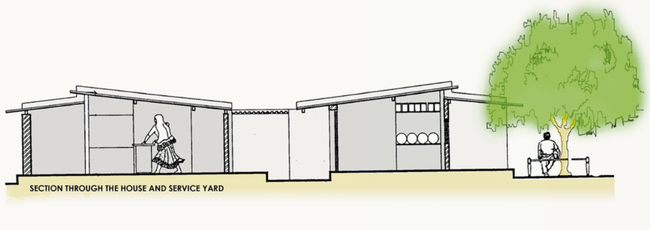
12. Voluntary neighbour choice. The most innovative and bold project decision was to give voluntary choice to each family to select its neighbour and to each community group (cluster) to choose its neighbouring cluster. It was a risky decision too, as the 2,250 project families included Hindus and Muslims in an almost 50:50 ratio. In a city with a history of communal tension and riots, this composition was seen as potentially explosive. Yet in a complex sociometric exercise, the first 1,300 families were helped to select their own neighbours. It also had a positive effect on the communal harmony in the new township. This may be seen in the context of present practices in the public or private sector housing projects, where the apartment owners, who pay a high cost in millions, have no freedom or opportunity or say in selecting a neighbour. And in India, a good neighbour is big social capital.

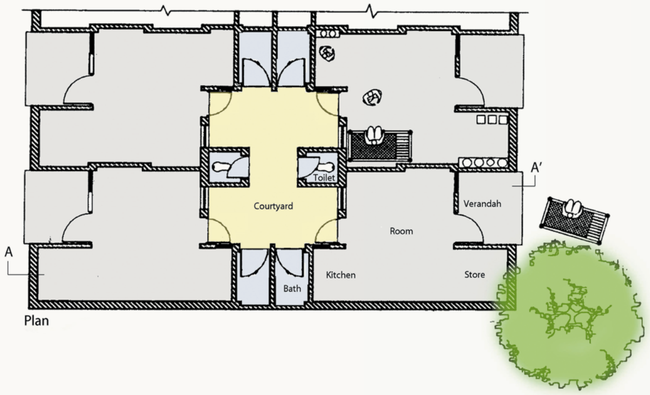
13. Integrated effort. This was undertaken considering the relocation nature of the project arrangements, which were made for those who were adversely affected. More than a hundred residents were helped to get bank loans to buy a bicycle to improve their mobility. Skill training and income supplementation activities were organised, especially for women, who lost their second or first livelihood income. The all-woman patchwork cooperative started by the project by training a community leader at the National Institute of Design in Ahmedabad is still running and exports hand-crafted goods abroad besides selling them in the local market. Sarjan, a programme that encouraged creative expression by the children, is still active and seen as one of the most innovative in its conception.

14. As urban social housing projects go, the project refused going multistorey and instead built small houses around good-sized, community open-to-sky-courtyards, thereby facilitating shared living and community interactions. It still achieved a density of 140 families per hectare and gave them the freedom to extend with mutual consent. That very little encroachment in the courtyard is visible even today shows the planning wisdom which favoured community courtyards in place of a few more yards in the private plot for each individual family.



Community center


SECTION THROUGH THE HOUSE AND SERVICE YARD



Community centre / Cluster of four houses with service yard (ASAG / Kirtee Shah)

instalments, Rs.15–20 per month per family for a new house. A larger number of them expressed a desire to invest an amount of which they would have to pay not more than Rs.20 per month in loan instalments. HUDCO at that time was giving loans at 6 per cent for housing for low-income groups. This loan was to be repaid in monthly instalments over a period of twenty years. Deducting about Rs.4–5 for the taxes and maintenance of services from Rs.20 (the people expressed their capacity to pay for the house), it was worked out that Rs.1,700–1,800 could be made available for the purpose. This, added to the flood relief subsidy from the Government of Gujarat and Oxfam, made a sum of Rs.2,800–2,900 that could be spent on the house. The completed house at Vasna cost Rs.2,860 (US$45 at the current exchange rate). The cost of the unit, thus, was kept strictly within the affordable limits and expressed the capacity of the community.

People's participation

Attempts were made to involve the community in the design of the houses and the site layout. A few schematic preliminary designs were evolved based on the feedback of the earlier projects and the expressed needs of the community. Wooden models of alternative designs were taken to different slum clusters by a team of community workers and architects. These were discussed by the individual families, neighbours, and leaders. Their comments and suggestions were incorporated while finalising the design and layout of the house.

At one stage in the process, it was pointed out that the people were not able to visualise or imagine the finished house through the wooden scale models. To overcome this, a block of eight houses was constructed on the site. A formal foundation stone-laying ceremony was then organised. The community members were individually invited to this prestigious event, which was presided over by the Governor of Gujarat. Many of them attended the function, inspected the model houses, and suggested changes.

The changes that could be made within budgetary limits were accepted. Participation in the construction of the houses was optional and voluntary. Only 19 per cent of the contacted families were able to participate in construction. Most found it difficult due to lack of construction experience, higher paying jobs elsewhere, or simply the physical inability to do manual labour.

Yet, about 130 consenting families were shifted to a transit camp near the site. They worked for a limited time building houses, but their number gradually dwindled for several reasons.

Project committee

Perhaps the most important organisational innovation which accounted for the speedy implementation of the project and facilitated proper role playing by the project partners was the project committee, a semi-autonomous organisation created by AMC for decision making and implementation. This arrangement not only insulated the project from political interference but also safeguarded its interest during a political crisis that brought down the state government as well as the supersession of the municipal council. The arrangement for institutional coordination, through the mechanism of a semi-autonomous committee, distributed responsibility among the project partners according to their respective strengths. Thus the representatives of the Government of Gujarat and the AMC as members of the project committee helped in mobilising funds and advised in administrative, procedural, and technical matters. The other set of activities, including architectural design, planning, community involvement, allotment of houses, and related matters were left to ASAG. Much of the project's success may be attributed to the helpful relationship and positive role-playing facilitated by the project committee. Undoubtedly, the relationship of trust between AMC and ASAG and between ASAG and the community, while it lasted, proved to be the major asset of the project.

Design and cost

At Vasna, single-storey, low-cost (Rs.11.25 per square metre), low-specification houses were constructed instead of multistorey tenements. Each family was given a plot of 30 square metres on which a 25 square-metre house was built with a multipurpose room, a covered verandah, cooking and storing alcoves, a bathroom, a toilet shared between two houses, and a common service yard shared between four houses. A water tap in each house, a regular sewer connection for waste disposal, an asbestos cement roof, 23 cm-thick outer walls, and 11.5 cm-thick intermediate walls of brick and cement mortar were provided. Mud and cow dung were used for wall plaster and flooring.

Outdoor living is a common feature among these communities. In their immediate slum surroundings as well as in the villages of their origin, household activities spill over into the open spaces in front of the houses. To provide for this and to facilitate community activities, the houses are built around large interlinked courtyards. Typically, a courtyard enclosed by eight houses measured about 12 by 16 metres. These courtyards have become a central focus of family life and group activities.

Community centre / View of a typical unit (ASAG / Kirtee Shah)

The cost of the dwelling was kept within the Rs.2,900 limit. The project strictly adhered to the ceiling cost to avoid placing any extra burden on the families. Cost monitoring throughout the implementation phase was strict and disciplined. The major design decisions included the following: one toilet between two adjoining houses; back to back houses to minimise the cost of service lines and to increase density; small clusters of two houses to maximise common walls and density; low rise, high density construction in single storied structures; use of local and indigenous materials; and lower specifications. It was agreed through consultations that to accommodate the cost within the budgetary limits, some components of the house would be left undone to be completed by the families on their own, thus they completed flooring and wall plastering themselves (often using mud and cow dung), added a door to the bathroom, and made other changes to complete the unit to suit their individual needs and choices. After a long debate, it was decided to adopt only one type of design, though it meant ignoring specific needs and variations in ability and willingness to pay. It was considered that cost reduction through common walls, shared facilities, and so on would be possible if there were only one type of design. It was also argued that building uniform dwelling units would afford a greater economy of scale in materials and facilitate supervision and quality control. Several factors contributed to keep the costs low and within the budgeted limit (in hindsight and with more experience, it was realised that more than one type of design should have been developed to accommodate different needs and varying affordability capacities).

Several factors contributed to cost saving as well as preventing the cost escalation during the eighteen-month construction period. One, the project committee maintained a constant flow of funds, avoided procedural delays, and provided flexibility to make the cost-cutting changes. Two, the labour supervision contract saved approximately 15 per cent on the total cost of construction as both the contractor's profit on the materials and the system of extra items were eliminated. Three, due to the flood relief nature of the project, certain concessions in taxes, levies, and duties, for which ASAG lobbied with the state government, resulted in savings. Four, substantial cost reduction also occurred due to ASAG's unconventional approach in the procurement of materials. Whenever possible costly items were replaced with local low-cost substitutes, and due to its non-profit nature, ASAG's overheads were low. ASAG supervised construction and provided multiple design and community development services. The project thus achieved reduction in cost by at least 30 per cent compared to a conventional construction project.

Neighbour selection

Long before the first family moved to the new township, the project managers had realised the complexity involved in the allotment of houses. Lack of harmony and cooperation and even social conflict are often attributed to the insensitive allotment of houses in large projects. At Vasna, the risks were unusually high. Approximately 44 per cent of the eligible families were Muslim; the remaining were Hindu. To segregate them in the new township, in view of the known history of hostility, tension and conflict, would have meant the perpetuation of prejudices and misuse of an opportunity for social integration. On the other hand, to mix them indiscriminately would run the risk of sparking social conflict. The conventional method of drawing lots to allot houses and thereby select neighbours was not only improper but, in this case, it was potentially risky. After considerable discussion with AMC and the promoter as well as extensive consultations and negotiations with the community leaders, it was decided to leave the choice of neighbours to the homeowners. Each family was given an option to choose its own neighbours. In a complex sociometric exercise spanning nine months, they were asked to identify the neighbours with whom they would choose to share the toilet, the service yard, and the courtyard. It was a lively and stimulating experience in group behaviour and decision making. Through the dialogue that ensued, people weighed options, used their discretion, and made decisions. More importantly they displayed immense wisdom and responsibility. And no one could complain that he/she was saddled with an unwanted neighbour. Though difficult to establish the current status, as some of the original families have moved, at least in the early stages of occupation it was ascertained that the participatory allotment process resulted in a cohesive neighbourhood with congenial relationships between the neighbours and a special community environment of cooperation.

Social action component

The social action component, necessitated by the project's participatory nature and its emphasis on a wider concept of community development, was a special characteristic of the project. Conceived as an integral part of the resettlement process, it was designed with the following objectives in mind:

- To solicit community participation in decision making, problem solving, resource raising, and so forth.

- To help correct social and economic dislocations caused by change in residence.
- To assist in improving access, availability, and use of physical and social services, especially in health, education, and family welfare.
- To help improve productive skills and earning potential through training and business support.
- To identify, strengthen, upgrade, and support existing community-level organisations as well as create new ones to build a foundation for self-reliance.

Community organisation

Trained community workers were the intermediaries for the social action component. Working with the people, and not for them, they played an enabling, facilitating role. They tried to organise communities to participate, invest, cooperate, and work together—even while they were in temporary shelters on the river as construction of the township continued. The community workers created a climate for involvement through activities that helped supplement income.

During the planning stage, the community workers facilitated collective decision making. They organised people to voice their views on the selection of the site, design of houses, site layout, and other matters. During the transfer phase, they contributed to neighbour selection and made efforts to solve people's adjustment problems. In the post-occupation phase, they identified and trained leaders to assume estate management responsibility.

Income supplementation

In the earlier stages of the project, it was thought that a change in the place of living would result in some economic hardships. Repayment of the housing loan, increased cost of living due to improved services and better access to social amenities, higher transportation costs involved in maintaining social and economic ties with the previous place of residence, and loss of job opportunities due to increased distance were considered to be some of the factors which could create additional financial burden.

To prevent subletting and shifting back to the old settlements, to avoid a drastic cut in the essential needs of life, such as nutrition and education, to meet the new obligations, and, more importantly, to sustain the process of change and development initiated primarily through outside intervention, it was considered necessary to start income-generating activities as an integral part of the housing programme. The additional monthly financial burden was estimated at Rs.35, which meant approximately Rs.1 million per year for all 2,250 families. Since it was impossible to generate an additional income of Rs.1 million, a selective approach was adopted, and it was decided to work with the poorest 300 families, whose income was below Rs.250 per month.

Women working at the patchwork centre (ASAG / Kirtee Shah)

Many activities were started, and the most successful among them, which has survived and still functions today as a women's cooperative, was a patchwork centre. Seventy women were taught at a training and production centre started by ASAG. Their products (cushion covers, shoulder bags, bedspreads, wall hangings, and so on) are currently sold in the city market and exported. Bank loans for working capital, business promotion, and bicycles were other successful income support activities.

Education

The community workers, in cooperation with District Panchayat (local self-government), started a primary school immediately after the families started moving to the new township. Though the inadequacy of formal education, particularly for the poor, was recognised, for obvious reasons the project could not create an alternative educational system for the entire community. However, through Sarjan, an experimental education programme for pre-primary and primary school children, opportunities were offered to foster children's creativity. The children were provided simple tools (newspaper, discarded toothbrushes, charcoal, colour, water bowls, and so on) to express themselves creatively in drawing, painting, music, and other media.

The response on the part of the children and their parents was overwhelming. With additional inputs, a qualitative change was noticed in their behaviour and performance. The school teachers maintained that the children involved with the Sarjan programme were more attentive, displayed leadership qualities, performed better in class work, attended school regularly, and were more disciplined and more motivated than others.

Child development centre (Bhavik Pithdiya)

Problem areas

From what has been described here, it may appear that the Vasna project was an immense success story. It was not. There were problems, shortcomings, failures, and mistakes. For a balanced assessment, it is necessary to mention them as well.

In-built difficulties are inevitable in an ambitious attempt to relocate a large number of people in an urban setting, especially if the people are poor and the goal is not only physical relocation but also community development. Many of these difficulties were structural and institutional in nature. Some of them were related to the sharply rising expectations of the people due to sudden and dramatic changes in their living environment. Some of the problems had roots in intergroup rivalry and local politics, and a few emerged due to lack of proper administrative and organisational arrangements concerning management of the settlement and delivery of services. Some problems emerged because the planners and the designers made faulty assumptions or made mistakes; the community workers did not succeed fully in building people's local organisations, and the symbolically natured income-supplementing activities were found to be inadequate considering the widespread unemployment, underemployment, and poverty that existed. Though not a single family was relocated under coercion or force of any kind, a few that were unable to accommodate and adjust sold or sub-let their houses and returned to the slums on the river and other slum pockets in the city within months of occupation.

There also was some corruption in the allotment of the houses, and as only one clerk of the estate office of AMC was eventually found guilty by the City Civil Court, the relationship between the municipality, the community, and ASAG became strained. In addition, the municipality did not fully fulfil its commitment to provide buildings and running costs for a community centre, primary school, health unit, and shops. There were also complaints that the houses were inferior in quality and allegations that the project funds were misappropriated. The community also complained about the inadequacy of the water supply, malfunctioning of the drainage system, and frequent blackouts due to failure of the street lights. As the municipality did not develop a *nala* (waterway) properly that ran across the site, the settlement flooded especially during heavy monsoons.

Though the houses were completed in time, infrastructure and basic services lagged behind schedule somewhat. In ascertaining their right and faced with incomplete infrastructure work by AMC, the occupants started defaulting on the payment of the agreed rent/instalments while the municipality's insistence on the payment of arrears and guarantee of regular payments advanced as a precondition to complete the promised work. A group of concerned community members filed a civil suit against the project committee for failing to fulfil the promises made to the people. Inter-group rivalry and competition for power and leadership prevented the community from presenting a united front, which weakened their bargaining power with the authorities and reduced effectiveness of the developmental process.

Community workers found people slow to respond while the experts on community development felt that the

A tall building is a statement of status (Bhavik Pithdiya)

Colours make the place vibrant (Bhavik Pithdiya)

Community open spaces have been respected (Bhavik Pithdiya)

New houses (Bhavik Pithdiya)

A first floor and front verandah are common features (Bhavik Pithdiya)

overenthusiasm of the community workers to show results tended to make them abandon their "facilitators'" role, as they replaced people's initiatives with their own. On the other hand, there were many who thought that the efforts through the social action component to alleviate the effects of the dislocation caused by the shift in residence and to create a base for sustained development were inadequate.

Yet, at Vasna, a living community came into existence. The people made sizeable investments in improving and modifying their houses. Although the municipal shops were not built, people on their own opened about fifty shops on the front verandahs of their houses or erected wooden stalls in public places where the shops were demarcated in the site plan. Though for many years, the school building was not built by AMC, a school with over 500 children was started in a temporary, makeshift building. And people started organising themselves to redress their grievances, periodically presenting their needs and concerns to those in authority.

Emotionally attached to the project—it changed my career graph undoubtedly—and keen on understanding the changes taking place, I have kept on visiting the place over the years and kept on reflecting over the decisions and decision making processes. Though it was a partnership project between many official and unofficial agencies, and many professionals and non-professionals contributed, in multiple ways, to its design, implementation, and success, it is not untrue to say that I, as a young architect, director of a small NGO, and someone with great faith in the need for and role of civil society in such "development" exercises, had a significant role to play in shaping the project's destiny. And I say this with all modesty and humility. As the project director on behalf of ASAG, and the secretary of the project committee, I had the privilege to lead the project from the front. Starting from the first letter to the Ahmedabad municipal commissioner, which laid the foundation for a humanitarian and deeply people-sensitive development project (I consistently opposed seeing it as a "housing" project), to fighting for a system that made the families decision makers in selecting neighbours (despite being often reminded of the "risk factors" in doing it in a participatory, consultative way), to insisting on the house design around courtyards, to fighting the view within AMC which wanted multistorey apartments constructed ("for better land use"), I stood for the people and the value base of the project (in which the community would have the major say in how things were done). Except for a few decisions—such as using asbestos sheets for the roof, as the clay tiles were not available in the required quantity and were slightly more expensive—I have never regretted anything about the project and see it as a major contribution in my professional career.

Going back to the township project, it is not surprising that just about every house has changed. Most of our carefully crafted courtyards have been transformed. A large number of people have built two- or three-storey houses. The street pattern remains undisturbed as shown by Google Maps. Density has more than doubled. Probably three times more people live there now. I saw a few houses that remain unchanged—even the Paniyara, the water stand for the pots, is there as it was originally designed and constructed. Sankalitnagar is a transformed place now: busy, noisy, unregulated, almost unmanaged and little cleaned by the municipal authorities, and full of people and activity. The changes that people have made in their houses and other places need to be studied, as they show how the communities want to live and what they do to solve their problems. Each homeowner is a designer, and each house is a statement in his/her own aesthetics and design. People have not bothered about the building by-laws or the building-permit system that grants permission to alter the existing building or to construct a new one. All that seems to matter to them is their neighbours' consent. Most of the original families have moved. All families are Muslim now, Hindus having shifted. It appears a sad commentary on the changing nature of the social city. The violent clashes, the riots between the traditionally hostile communities, have been a matter of the past for over a decade. Yet, the changed composition at Sankalitnagar does reflect a worrying phenomenon, especially as in the early years of settlement, the communal harmony there was the talk of the town.

Probably a hundred times more investment has come in, from the residents themselves, compared to what was originally put in. A few cars but many more scooters, motorcycles, and bicycles are everywhere. The designated commercial facilities, which were not built initially, have now been built. Everyone that I talked to expressed hope and a desire to move ahead.

Many lessons lay buried in the forty-year-old story, a story of the poor community and a changing city. The plan and the ambition to make our cities inclusive demand that we study such rare examples of partnership for development. It is not a shiny success story, but it does have many lessons for planners, designers, and administrators.

Where is our housing coordinate? The current status and alteration outlet of housing in Shanghai / Jin Zhu

Jin Zhu (1973) is an associate professor in the Environmental Design Department of the Fashion and Art Design Institute of Donghua University in Shanghai, China. She majored in architectural design as well as art design and has been an academic guest at ETH Zurich. Jin Zhu has tackled architectural and interior design projects based on cost-efficient and low-tech strategies in Shanghai and has recently undertaken relevant research aiming to seek new forms embedded in traditional manual labour.

One non-architectural-background friend who has travelled to China several times asked me why there are so many high-rise residential buildings in Shanghai and how they can be built so fast. Simple questions out of curiosity trigger my pondering. Numerous unaffordable high-rise buildings that are taking place of both the old texture and former memory of this city certainly meet the needs of high-density inhabitancy. Yet a veritable forest of apartment clusters that change views, lifestyles, and neighbourhoods is more likely to show off the heroic ambition of an era. Nonetheless, between the shadows of those towers, crumbling multistorey Old Housing (OdH) and informal enclaves with inferior conditions fill the void. Yet the rumbling of cranes, pile drivers, and lorries in new construction sites might also be accompanied by demolition through directional blasting in another site nearby.

How could these dozen-floor towers "grow" so fast? The answer still lies in high people density: thousands of labourers gather with somehow mechanised or semi-mechanised appliances and work day and night, which speeds up the construction process. Yet, in achieving the goal of high speed and enormous quantity, the cost is paid in sacrificing quality. With the rapid urbanisation as well as changes of demographic structure and social status in China, tremendous housing units have been constructed since the 1990s, but they are of poor quality and are even predicted a lifespan of only twenty to thirty years. On the other hand, OdH will also "expire" because of the "invalidity" of their function and structure.

We could easily get lost in the montage of the space-time conversion and the collage between new and old. Where is our coordinate? How to update the existing housing under particular institutional governing and circumscribed restrictions?

Housing history and types in Shanghai – from small fishing village to metropolis

Shanghai, once an ancient fishing village, transformed into one of the biggest city in China after the port was opened. Today, sixteen administrative districts are located in 6.34 million square kilometres of territory, and there are 24.15 million residents, including 14.25 million native populations and 9.90 million transient populations. From 1990 to 2013, 1,757.96 billion Chinese yuan (CNY) was invested in the construction of public infrastructures in Shanghai and made up 26.3 per cent of the whole society fixed-asset investment in the corresponding period. Fourteen subway lines spread from urban to suburban areas, with which, combined with skyscrapers and busy telecom networks, the city takes on the material wrap of "modernism" (Stats-sh 2017). The OdH in this article includes Lane Residences, old slums or shacks, and Old Communal Housing (OCH). Lane Residences, which were especially prosperous from the 1900s to the 1930s, are hybrids of Western semi-detached houses and typical traditional folk houses with courtyards in the regions south of the Yangtze River. They experienced five phases: Old Shikumen, New Shikumen, New Lane Residential Building, Garden-House Lane, and Apartment Lane. Now Lane Residences are regarded as the representative essence of Shanghai traditional architectural culture and as important objects to be preserved. As far as the reason is concerned, compared to many other provincial capital cities in China, Shanghai developed within a short time and without deep traditional roots in ideological or material fields. Shikumen, with two to three storeys, might be the spiritual essence of a "unique" Shanghai "culture".

Ever since Shanghai was forced to open as a treaty port, the earliest slums and shacks, which had been built spontaneously in desolate graveyards, barren grass-lands, and niffy creek banks, were wretched accommodation for poverty-stricken non-native labourers (Wu 2014: 67–77).

After the 1949 liberation, with nationalisation instead of privatisation of the land, the OCH was invested in, constructed, and owned by the state. It was a mega-scale, "new residential quarter of the working class" initially motivated by the welfare housing distribution system. Since the 1980s, commercial properties have manifested into common life along with the development of an open real-estate market (Shtong 2017). Later, in 1998, the China Housing Reformation brought about change, and the OCH was sold to urban employees and the ownership completely transferred to individual households.

Undeniably, the housing conditions have improved since then. In 2016, per-capita usable floor area has increased from 4 square metres/capita thirty years ago to 18.1 square metres (Stats-sh 2017). However, different to what is shown in external publicity, relevant data shows that around 67.15 per cent of families in the Changning district still live in OCH (163 2017). If we compare the price of new housing and the average income of civilians, it is no wonder that several generations have to live squashed together in OdH: the average housing price in Shanghai, including urban and suburban areas, is 45,447 yuan (CNY)/square metre, as of October 2016 (Sh.fang 2016). However, the average annual income in 2016 was 76,536 yuan (CNY)/capita (Cngold 2017). Ironically, the total annual income of a civilian could afford less than 2 square metres of housing in Shanghai.

Once the tremendously over-priced housing market expanded, with social grumbling and the risk of a bubble economy, a housing guarantee system at various levels had to be issued as the consequence of the government's accountability. Besides new economically affordable housing, the municipal government purchased the idle flats and altered them into low-rental housing stocks. Furthermore, settling Rural-Urban Migrants (RrUMs) in Shanghai have been on the agenda because they are excluded from access to those two housing systems mentioned above as well as the housing public accumulation fund system because their *Hukou*s (household registration permits) are still registered in rural areas (Research Group of Shanghai Survey Force of State Statistics Bureau 2013).

Existing hidden informal enclaves

In the cities of China, ownership of the land belongs to the state while in rural areas the land belongs to the collective. More straightforwardly speaking, land privatisation doesn't exist in China nowadays, and any construction without land usage permission or property without a certificate of ownership is deemed illegal. Here informality operates on the margins of legality, causing a low-end market and an "illegal" economic chain that supply inferior-quality daily necessities, clinics without licenses, and underground food processing (Leju 2017). Given these factors, governments are working on these issues by stressing that they aim to not just uproot the breeding grounds for social problems—the obstacles to modernisation and urbanisation—but to also deliver better overall living standards (Zhang/Zhao/Tian 2003: 912–937). Informal enclaves in China are not identical to the phenomenon in the global South due to the distinct governmental instrumentality. As some Western academics argue, compared to Latin America "the Chinese state plays a different, more active and prominent role in the governing of informality that has led to its neglect as a popular or academic analytical category" (Ferchen 2012).

Despite the negative stigmatising labels like "the scar of city" and "urban pathology" (He 2015: 2849–2873), academics provide a balanced view about the positive role that urban villages play. At least, they accommodate the low-cost housing for those underclasses and new nomads who have busy livelihoods (Li/Wu 2013: 923–949).

Furthermore, the situation in Shanghai differs from either Beijing or the areas around the Pear River Delta, like Guangzhou and Shenzhen. In terms of development models, Guangzhou benefits from its market-oriented approach (Zhu 2009: 5–13). Thus, more flexible and economic-benefit-based models "boldly" breed in informal enclaves where the manufacturing factories are centralised. That is one of the reasons why more academics take Shenzhen or Guangzhou as the typical object of case studies when making research on urban villages. Shanghai is more heavily regulated, with a strong legacy of the centrally planned economy over informality in order to avoid speculation with gaming the system and capitalising on the lack of oversight (Li 2016: 28–30). As a result, what in Shanghai is called "hidden informality associated with illegality" appears relatively weaker and under the control of governments and the guidance of mainstream medias (Wu/Zhang/Webster 2012).

Basically there are three main types of "hidden informality" existing in housing in Shanghai: informal settlements in old residential areas, urban villages, and small property right housing (SPRH).

From the early years after liberation onwards, the Shanghai municipality gradually "cleaned up and purified" the shanty towns. Hence there are fewer mega-slum areas. However, spontaneous activities with tenancy informality are still to be found sporadically in different corners of OdH. For instance, in the area near Qipu Road, a wholesale garment market with a powerful niche position, many RrUMs group-leased a sort of old Shikumen housing area called Guang Shi Li Nong from subtenants, much of which is being demolished starting this year. People there, with high-density living conditions, have no alternative but to misappropriate the outdoor space to

Drying racks fixed on the facades of old mass housing blocks are pervasive due to the absence of balconies or laundry space inside (Jin Zhu)

A self-built incremental attic might be used as a studio or bedroom despite considerations about street facades and structural safety (Jin Zhu)

An informal terrace acts as an extended storage area, which is compact but necessary for the tiny apartment (Jin Zhu)

Old Shikumen housing with structural hazards should be "updated" not only with newly painted surfaces but also with reinforced structures / Another "isolated" community in an urban village even though it is just located among the chaotic streets (Jin Zhu)

In a narrow lane, an incremental two-storey structure "grows" parasitically beside the facade of Old Communal Housing (Jin Zhu)

Rural-Urban Migrants are protagonists of their living environments although slums and shacks in urban villages are the discordant notes among the ambient high-rise buildings (Jin Zhu)

construct for their older generations or offspring (Fan 2001). Some shacks survived decades due to the "omission" of slum clearance and expediently repaired, extended, and structurally altered them over several generations while others are incremental installations, such as brackets from outside air-conditioning units and drying racks. Some shelters are set up parasitically and used for storage beside the wall in the courtyard, on balconies and terraces, or underneath staircases. In order to gain more compensation from the government for being moved, which is dependent on the size of the household, some householders thus misappropriate more outdoor public space and temporarily enclose it. It is hard to dismantle many housing units involving informality due to the reluctance and uncooperative nature of "nail households", who prefer playing mah-jong (a sort of popular recreational game in China, sometime also as a form of gambling) and waiting for compensation. Recently, many tiny shops along the streets, which were transformed from ground-floor apartments of OCH, have been compulsively dismantled in response to the policy of "demolishing the illegal buildings", because the "misuse" of residential buildings as stores with commercial programmes and vice versa is prohibited. The vivid streets that have once forever offered convenience for civilians are being replaced with rigid rectified facades.

Another type of informal settlement also facing being dismantled sooner or later is situated in urban villages. However, Gaojiabang, called the poorest area in Shanghai, is "modestly" hidden from the bustling commercial district. Rather than spend more for accommodation, RrUMs as retailers, street vendors, or service-industry staff prefer to save enough money to self-build housing in their home villages, which could be another type of illegal housing if they occupied the arable land (Fan 2001). Recently, however, because of high removal costs, high appreciation of land value, strict regulation of land transition, and fragmented and ambiguous ownership of land, the situation is temporally moving towards a deadlock of redevelopment (Wu et al. 2012; Research Group of Shanghai Jiaotong University 2014: 30–36).

About ten years ago, SPRH in peri-urban or suburban areas, such as the Songjiang and Fengxian districts, appeared and became a cheaper alternative to housing on the open market. However, governments have already announced this will cease in order for them to construct buildings on the land and sell them. Generally, there are two types of SPRH. One was construction on collective building land (homesteads of the villagers), which could be sold only to the local villagers; another was constructed in collectively owned enterprise land or arable land, which was illegally occupied. Policies makers warned the public that SPRH couldn't offer housing ownership certificates because they didn't acquire any obligatory permits in the project planning, construction, or sale phases. Therefore it caused disputes about transfer, legacy and land expropriation, and compensation. In addition to that pitfall, it is hard to guarantee the quality and sufficient infrastructures (Zktw 2017).

Nevertheless, the motivation for people to purchase this housing depended on the affordable price, which was less than 50 per cent of common commercial housing. Developers who invested in SPRH paid villagers inexpensive fees for the land usage instead of paying substantial land-transferring fees, farmland conversion tax, arable-land reclaiming tax, municipal subsidiary fees, and so forth to governments. So the costs were certainly reduced. In addition, covert property transactions excluded from the restriction of the "housing purchase quota policy" provided chances for leeway investments. Some academics depict it as an "illegal but rational" housing typology and suggest formalising the informality through redefining and transferring the nature of the land because this unconventional but "sophisticated" housing basically has all the attributes of common commercial housing except the definition of the nature of the land (Sina 2017). Unexpectedly, new SPRH, even safe and in mint condition, will be included in the demolition scheme due to its illegality. Meanwhile, the commercial buildings that are ambiguously used as residential spaces are now prohibited.

Advantages and disadvantages of Old Housing

OdH is mainly situated in a convenient location. Moreover, lower prices due to their small size and relatively modest price increasingly make these dwellings favoured by rigid-demand groups, especially the "New Shanghainese". Yet speculators still purchase those that will soon be dismantled in order to get removal compensation.

However, the drawbacks of old dwellings are obvious. Thanks to defective typologies and absent environmental facilities, such as parking lots and playgrounds, they do not even meet basic living needs. To take some extreme cases, in old Lane Residences habitants have to go to latrines in unsanitary conditions while in OCH from four to maximum eight habitants have to share the bathroom. In addition, there are hidden safety hazards in brick-and-wood structures built with low criteria, as well as aged electricity facilities and water hoses. Furthermore, informal self-construction disturbs the facade, which interferes with the "decent" appearance of the city. Yet even more concerning is the deteriorating vitality of the residential community and the worsening homogeneity caused by disadvantaged-group habitants with low income and without the capability to change their living circumstances.

Current refurbishment

The renovation of old areas shows a more complex image than mere new construction because it intricately involves the habitants' quality of life, democracy, and a legal system such as a public representative hearing system, an autonomously determined system of householders. Here, different sections of the area are stimulated with efforts in preservation, demolition, and alternative measures simultaneously, according to different hierarchies and life cycles of the buildings.

Preserving the facade becomes a controversial issue because of its "superficiality". For example, the Xintiandi and Sinan Road areas look like traditional housing, but actually both the structures and their functions have been totally altered. It reflects the respect of the contexts and local idiosyncrasies even if it is only the superficial form protecting in semiological terms.

On the contrary, some tumbledown OdH would be dismantled if the majority of residents voted for it. Yet compulsory demolishment should be rethought. Conservational buildings could be damaged through imprudent negligence. In OdH areas various buildings, including self-build structures, traditional Shikumen houses, and even conservational architectures, are sensitively adjoined. Informal shelters are precisely the manifestation of insufficient housing. They are useful transition settlements based upon the esteem of an individual's entitlement to live. If not rethought, RrUMs will lose their accommodation and establish other enclaves elsewhere.

Besides preservation and demolishment, OdH with firm structures recently began to be refurbished, from neighbourhoods to apartment units. Governments, district estate management sectors, and habitants pay one third of the total refurbishment costs, respectively, for apartments (Zhao/Sun/Zhao 2010: 25–32). For newly resettled schemes, there are two options: Plan A appeals to residents returning back after refurbishment. Plan B presupposes that the bigger-apartment households purchase the smaller apartment next door in order to optimise the typology; meanwhile smaller-apartment households use the payment to buy another flat in a cheaper area (Command Office of Old Housing Refurbishment in Yangpu District in Shanghai 2010: 48–51).

Although developers are encouraged to be involved in the refurbishment of OdH through preferential terms and government subsidies so that financing channels can be widened, those projects are undesirable for developers due to moderate profits. Thus, some developers even absurdly propose to extend OCH to high-rise flats for colossal profits. It has been argued that the refurbishment of OdH should be tied together with new compound developments in order to share the infrastructures and parking lots of peripheral new communities.

Ever since 1999 Shanghai launched "Reroofing Projects" for OCH, which focused on adding new pitched roofs to existing flat roofs for the purpose of waterproofing, heat insulation, increased space, and the unification of the city silhouette. Joint bathroom and kitchen too were changed to be separate units. And for accessibility, elevators were installed to meet the needs of the elderly.

Currently the climate is positive: increasingly non-profit organisations are helping in the renovation of old dwellings. One show on Shanghai Dragon TV called *Meng Xiang Gai Zao Jia* (Dreaming Housing) demonstrates cost-saving-based cases with intelligent designs. Households pay relatively lower costs, and their narrow space can be "magically" maximised by architects who participate as low-profit professionals or even volunteers. Some shelters are set up illegally, such as incremental housing built between two lanes. In some cases architects coordinate with the relevant administration offices to solve problems such as extending old sewerage pipes to the septic tanks of latrines for independent private toilets, for example. This not only promotes the propaganda of "social positive energy" but, more importantly, it is borne from the tolerance of the government. Consequently the architects are advertised at the same time.

Except for the efforts of indigenous forces, some international architects took a different tack. Next Architects proposed the "breathing home" concept. It focused on inserting industrialised "solar-powered primary units" as basic-living cells, which are assumed to be commonly sold in markets and can be adjusted according to the autochthonic climates. This proposal revealed a vision to supply start-up incubators for young career beginners through updating OdH with clean energy (Jiaju.sina 2017).

Proposals for further refurbishment

Renovation projects are susceptible to bottlenecks especially due to lack of consideration about typological diversity and spatial atmosphere. Thus, how to modify the function zones based on user groups?

Firstly, home-based care for the aged instead of nursing homes could be a reasonable and ideal model for elderly people in China. Instead of newly built comprehensive masses, the efficient placing of public small-volume units on any available patch of land or adaptively reusing some floors to become a canteen, health clinic, laundry, and recreation spaces could be more logical. Some old buildings could be entirely bought up by developers and renovated to be served apartments or shared apartments for stable long-term rental, which real estate agencies could be commissioned to manage. In that case, senior citizens could return there. Non-local youth might then be able to rent part of their apartments for lower rent and meanwhile accompany or look after the elderly householders.

Secondly, the lack of financing always hits our buttons. Nevertheless, low-cost strategies combined with industrialised means should be revaluated from a building lifespan perspective.

Certainly, it's inevitable that prefabrication might be the most rapid and less polluting option for big urban settlements. Integrated kitchen and bathroom combined with a customised system could be prefabricated as well as expanding balconies, elevators, staircases, and so on. But the challenge also exists of how to provide the convenience of repairing instead of replacing the whole unit should any component of the integrated modular whole breaks. Importing might result in high costs as well as in obstacles to maintenance and repair while autochthonic prefabricated manufacture lines are still in the initial prototype stage.

The costs of a detached house in England and Wales consists of around 40 per cent labour, 26.7 per cent material, and 33.3 per cent profit (Booth/Dyson 2007: 4). While in Shanghai, in common civil architecture projects, labour costs account for only 18–21 per cent of the total costs. Materials make up 50–55 per cent, and machinery makes up 5–8 per cent. The remaining indirect costs make up 13–24 per cent (Baidu 2017). This shows that the labour costs are much lower in China than in industrialised countries. Therefore, the cost-saving model in industrialised countries based on reducing on-site operations due to higher wages might not be functional in China, and vice versa.

Some site-prefabrication cases in Latin American, India, and rural areas in China could inspire us – for instance, pre-casting structural units or facade panels through pouring concrete or using brick or recycled materials such as concrete aggregates. However, the craftsmanship, technique, performance, details, and durability could not be guaranteed.

Low-cost should be interpreted as cost-efficient rather than the synonym of "low-quality". These structures could be stopgaps if the environment were to be sacrificed in order to achieve short-term economic return. If the use of energy-efficient equipment and healthy materials was obliged, there would be an increase in eco-tech suppliers, which in turn could push the production price down gradually (Hu/Geertman/Hooimeijer 2014: 3475).

Thirdly, self-build and spontaneous construction should be under the guidance of professionals and may utilise indigenous materials and revive traditional techniques.

Obviously, self-build reflects the tangible desires of habitants instead of the lucrative goal of developers. Nonetheless, not every habitant has sophisticated skills, the intention of structural soundness, and an awareness of fire safety. Hence, self-create processes should be conducted by architects, engineers, skilled workers, and project managers, who could provide the guidance for basic regulation, knowledge, workmanship, material purchase, and project timing and management, among other things.

Self-builders could tackle firstly basic construction, which could include setting-out, ground preparation, laying concrete foundations, and brick-work, as "training"

(Booth/Dyson 2007: 137–150). DIY furniture and decoration would be available for habitants if neighbourhood committees organised courses in the relevant skill.

The autonomy of the end-user leads to an independent expression of indigenous identity and local traditions (D'Hooghe 1989: 228–236). Traditional construction techniques and crafts, such as mortise and tenon joints, bamboo weaving, and rammed earth and brick masonry – that merging of the intelligence of mechanics, mathematics, and aesthetics – might disappear if they were replaced by modern fabrication techniques, while merging them into new processes can evoke structural and ornamental significances.

Because of the repetitiveness of manual labour, experienced workers could be more specialised rather than some consultants who just propose pedantic notions. Especially in small projects, discussing with workers about rectification directly on site and figuring out problems contingently could avoid cumbersome procedures that need dozens of permits and lots of time. A few craftsmen already participate in the restoration of historical housing in Shanghai. Carpenters who master the skills of mortise and tenon joints can repair the wooden structure or furniture "invisibly". They calculate and draw directly on the timber and adjust details according to the diverse dilatation coefficients. Without expertise from school, they have acquired practical approaches related to modern structural logic (Eastday 2017).

Conclusion

Currently industrialisation is energetically advocated in the publicity by the government. While the approaches utilized in developed countries may confront the localization issue in developing countries, rather than exemplarily demonstrating high-tech and generating enormous costs, it is better to learn from tradition, which in no way means retrograde processes or anti-modernisation. Since we have the advantage of a labour-oriented model, why should we give up? Low costs combined with manual labour may still exist for the next few years before industrialisation occurs as well as using high-tech and renewable-energy in the development process. As the terminal of the construction industry chain, architects have already been seeking methods to protect autochthonic idiosyncrasy and more or less "naively" dreaming about the utopian, which doesn't fit in the slogan of "large-scale prefabrication" or, in another time, the unrealistic radical Great Leap Forward as in 1959. The potentially complex issue is how to balance the ratio between industrialised prefabrication and site labour.

In view of the state system in China, certainly large-scale renovation needs top-down control, guidance from professionals, the matching of funds from government, and investment by developers, which would be better used for boosting housing projects than highly-publicised vanity operations. Otherwise limited power cannot change society as a whole; it would even run the risk of falling from disorder.

On the other hand, spontaneous settlements called informal enclaves in urban areas shouldn't be always negated, because the decisions of individuals could bring vivid diversity. Thus, a multi-collage phenomenon among spatial structures, habitant levels, and land ownerships should be approbated (Shi 2008: 58–62).

Many self-build activities in rural areas have optimisation embodied in the following ways: taking advantages of natural resources; passively confronting severe environments; instinctively perceiving spaces; and affecting, motivating, and benefiting mutually through group collaboration (Lu/Jiang 2012: 23–27). How to learn and shift the self-build paradigm from rural areas to urban areas concerns not only architecture but also the policies on land ownership and construction regulations. Regarding small-scale refurbishment, such as bungalow, kiosks, environmental facilities, garden greenery, interior spaces, and so on, habitants could be involved in terms of both building and financing. More flexible instrumentalisation including spontaneous intelligence, enthusiasm, and the capabilities of the populace should be tolerated, accepted, and transferred.

The title of formality or informality may not be the key issue that outmatches everything, yet to authentically improve the liveability and quality of life under material conditions and economic restrictions goes a long way as an abiding principle.

Tony Booth/Mike Dyson (2007): *How to Build Your Own Home. The Ultimate Guide to Managing a Self-Build Project and Creating Your Dream House*. Oxford, UK: How to Books Ltd.

Command Office of Old Housing Refurbishment in Yangpu District in Shanghai (2010): "Blazing a Harmonious New Trail of the Alteration in Housing in Old Urban Areas. A Summary of Old House Alteration in Anshan Neighborhood No. 4", in: *Housing Technology*, 2, pp. 48–51.

Alexander D'Hooghe (1989): "Preserving the Identity of Small Settlements during Post-Disaster Reconstruction in Italy (1)", in: *Disasters*, 13, 3, pp. 228–236.

Matt Ferchen (2012): "Informality in China and America. Comparisons and Interactions", in: *Carnegie-Tsinghua Centre for Global Policy. Setting the Agenda. Asia and Latin America in the 21st Century*. URL: http://carnegietsinghua.org/publications/?fa=49981 (accessed 1 April 2017).

Wencheng Fan (2001): "The Misunderstanding to Informal Housing Concept. Research on Informal Housing in Tianjin, China". n-aerus, ESF/N-AERUS International Workshop. URL: http://n-aerus.net/web/sat/workshops/2001/papers/wencheng.pdf (accessed 1 April 2017).

Shenjing He (2015): "Consuming Urban Living in 'Villages in the City'. Studentification in Guangzhou, China", in: *Urban Studies*, 52, 15, pp. 2849–2873.

Hong Hu/Stan Geertman/Pieter Hooimeijer (2014): "The Willingness to Pay for Green Apartments. The Case of Nanjing, China", in: *Urban Studies*, 51, 16, p. 3475.

Yi Li (2016): "Issues and Strategies about the City Administrative Enforcement in Shanghai", in: *Management Observe*, 608, 09, pp. 28–30.

Zhigang Li/Fulong Wu (2013): "Residential Satisfaction in China's Informal Settlements. A Case Study of Beijing, Shanghai, and Guangzhou", in: *Urban Geography*, 34, 7, 923–949. URL: https://www.researchgate.net/publication/278409308_Residential_Satisfaction_in_China%27s_Informal_Settlements_A_Case_Study_of_Beijing_Shanghai_and_Guangzhou (accessed 1 April 2017).

Jiansong Lu/Min Jiang (2012): "The Connotations and Features of Spontaneous Construction. The Redefinition of the Research Scope of Contemporary Folk Housing from the Perspective of Self-Organization Theory", in: *Architect*, 159, 5, pp. 23–27.

Research Group of Shanghai Jiaotong University (2014): "Research on Urban Village Reconstruction in Shanghai", in: *Science Development*, 64, 3, pp. 30–36.

Research Group of Shanghai Survey Force of State Statistics Bureau (2013): "The Research on the Housing Guarantee Issue of Rural-Urban Migrants in Shanghai", in: *Statistics and Practice*, 11.

Jiaming Shi (2008): "Preliminary Study on the Relationship between the Collage of the Old City Area and Its Conservation and Renewal – Based on Analysis of the Northwest Part of Old Shanghai City", in: *Urban Development Research*, 15, 2, pp. 58–62.

Fulong Wu/Fangzhu Zhang/Chris Webster (2012): "Informality and the Development and Demolition of Urban Villages in the Chinese Peri-Urban Area", in: *Urban Studies*. URL: http://journals.sagepub.com/doi/full/10.1177/0042098012466600 (accessed: 1 April 2017).

Junfan Wu (2014): "The Construction and Transfer of the Stigma of Shanghai Shanty Settlements. An Angle of Historical Memory", in: *Social Science*, 8, pp. 67–77.

Li Zhang/Simon Xiaobin Zhao/J. P. Tian (2003): "Self-Help in Housing and Chenzhongcun in China's Urbanization", in: *International Journal of Urban and Regional Research*, 27, 4, pp. 912–937.

Min Zhao/Yimin Sun/Ning Du/Wei Zhao (2010): "On the Gradual Urban Renewal. Theory and Practical Strategies", in: *International Urban Plan*, 25, 1, pp. 24–32.

Xiaodan Zhu (2009): "On the Construction of National Central City. A Research on the All-Round Promotion of Guangzhou's Scientific Development under National Strategy", in: *Urban Insight*, 2, pp. 5–13.

Homepages

163 (2017): *News*. URL: http://news.163.com/15/1211/10/BAI115AC00014AED.html (accessed 11 March 2017).

Baidu (2017): *Zhidao*. URL: https://zhidao.baidu.com/question/1989188503322677867.html (accessed 1 April 2017).

Cngold (2017): Newtopic. URL: http://www.cngold.com.cn/newtopic/20160727/2016nshpjgzssm.html (accessed 31 March 2017).

Eastday (2017): *Sh*. URL: http://sh.eastday.com/m/20160529/u1a9402082.html (accessed 1 April 2017).

Jiaju.sina (2017): News. URL: http://jiaju.sina.com.cn/news/s/20170103/6221911368657077216.shtml (accessed 3 January 2017).

Leju (2017): Zhuanti. URL: http://sh.leju.com/zhuanti/czcgz (accessed 31 March 2017).

Sh.fang (2016): *Newhouse*. URL: http://newhouse.sh.fang.com/fangjia/ (accessed 9 November 2016).

Shtong (2017): Node. URL: http://www.shtong.gov.cn/node2/node2245/node75091/node75098/index.html (accessed 1 February 2017).

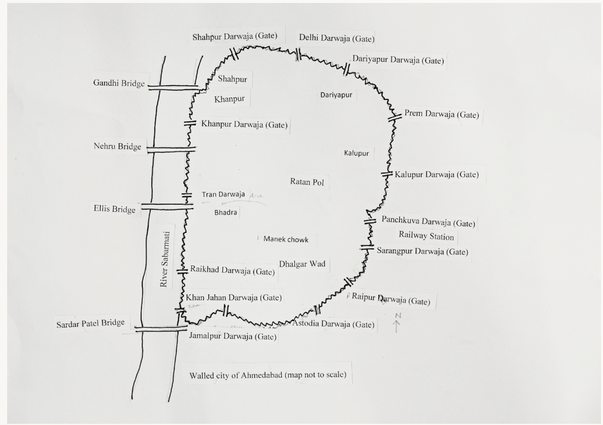
Sina (2017): Finance. URL: http://finance.sina.com.cn/money/lczx/20130903/094216646331.shtml?from=wap (accessed 1 April 2017).

Stats-sh (2017): 数据 发布. URL: http://www.stats-sh.gov.cn/sjfb/201602/287258.html (accessed 29 January 2017).

Zktw (2017): Fangchanzhengce. URL: http://m.zktw.com/fangchanzhengce/443936.html (accessed 31 March 2017)

Diminishing Vibrancy: Process of Informalisation in the Walled City of Ahmedabad / Varsha Bhagat-Ganguly

Varsha Bhagat-Ganguly is presently working as a professor at the Institute of Law, Nirma University, Ahmedabad. She actively engages in conducting research and research-based publications, teaching, public-policy framing and critique, and using alternative media for spreading awareness and social mobilisation on social and developmental issues. Her research interests are discourse on right's perspectives, land rights, land governance, people's movements, process of marginalisation, and social justice. She has authored fifteen books, forty-nine articles published in nationally and internationally refereed academic journals, and five book reviews and has edited journals published by premier academic institutions in India.



Map of walled city of Ahmedabad (Varsha Bhagat-Ganguly)

Historic highs of Ahmedabad city

Ahmedabad, the largest city in the State of Gujarat and seventh largest in India, is now 606 years old. It is a city which has seen continual growth for more than 500 years, under Mughal, Peshwa, and British[1] rule and post-independence. Gujarat was formed as a separate state on 1 May 1960. Ahmedabad remained a capital city until Gandhinagar was developed in the early 1980s. Recently, the Government of India announced a list of 100 "smart cities" in India, and Ahmedabad is one of them. A smart city conveys the ethos of globalisation and refers to advancement in terms of overall infrastructure, sustainable real estate, communications, and market viability, based on information technology and access and management of databases and networks through digitisation. In the creation and management of such a city, the role of private players is crucial. The World Heritage Committee of UNESCO announced Ahmedabad as a heritage city on 22 July 2017, thus Ahmedabad became the first heritage city of India. Mukesh Kumar, the commissioner of Ahmedabad city, claims that there are 2,600 heritage sites and more than 20 ASI (Archaeological Society of India) protected monuments.[2]

As such, the establishment of Ahmedabad by Ahmed Shah is believed to have been on the eastern side of the Sabarmati River in AD 1411. Arabian and Persian sources mention a town – Asawal – existing in the eleventh century, and Jain literary and religious sources – as Karnavati – in the thirteenth century. By the end of the fifteenth century, a fort was completed with twenty-one *darwaja* (gates) to enter the city. This is known as the "walled city" area of Ahmedabad. Ahmedabad ("she" is used for Ahmedabad city) has witnessed continuous growth and prosperity since its formation and has earned the title of Goddess Lakshmi in a Sanskrit epic written in the seventeenth century (Yagnik/Sheth 2011: 42).

In 1870, Ahmedabad attained the status of municipality. With the growth of the textile sector and about eighty textile mills employing about 200,000 workers, Ahmedabad earned the title of "Manchester of India" during the twentieth century. Of the original twenty-one *darwaja*, the city is now left with fourteen (Anonymous 2011: 23), as they have been razed for the expansion of roads and the development of the city. With the growth of industrial units on the eastern side of the Sabarmati River and development of residential and commercial hubs on the western part of the river, the city has expanded to 21 square kilometres and has witnessed multiple increases in population and investment opportunities in real estate.

Process of dwindle and informalisation

Any city can be believed to be ever-growing and expanding its economic opportunities and institutions where its pull factors encourage immigration, resulting in the increase in informal settlements. A vibrant city fulfils the mandate of development with certain prerequisites. This requires social interaction, collectives, political will, and initiatives. Yet the walled city of Ahmedabad has witnessed some events and processes that are very different from the usual understanding of growth, expansion, and informal settlements in a city.

This paper portrays different aspects and shades of a process of informalisation by linking and identifying gaps between aspirations of a smart city and a glorious past which is now being announced as the first "heritage city" of India. Informalisation refers to formal and informal processes which represent changes in use of resources and space, in the organisation of settlements or habitation, in sociocultural values, selective growth or decline of economic enterprises and institutions, and in the mindset towards heritage structures,

1 The British acquired Ahmedabad in 1818.

2 Any ancient monument that is in existence for more than 100 years and includes remains of the site of the ancient monument.

social policy, and efforts put in by civil actors to exercise potentials for development and growth of the walled city.

A street in Dhalgar Wad (Ravish Shah / Varsha Bhagat-Ganguly)

Human cultures interact to constantly reproduce and coproduce hybrid cultures (Wolf/Mahaffey 2016: 59). Writing about a city is a mix of a space and culture conceived, perceived, and lived.[3] While talking about a city, three major trends are observed. First, the contemporary discourse on a city focuses on space and its potential for expansion and as an engine of growth – meaning industrialisation, economic growth, expansion of boundaries, infrastructure facilities in a planned and modernised manner with regards to transport and communications, demographic changes, and the impact on settlement patterns, employment opportunities available, the ability to provide livelihood sources, and the use of modern technologies, including wireless network and access to digitised data and information. However, researchers have also claimed that the urban elites are capturing urban resources – land, finance, and water – through various means, forcing the poor to depend on and contest available resources, for which they pay high economic and social costs. One of the costs that the poor pay is facing and negotiating conflicts in their daily life over survival (Mahadevia/Desai/Vyas 2014: 1). The second trend is the discourse that considers environment and culture heritage resources important and looks at the first discourse as a strategy that has led to the "alarming depletion of the common stock of 'cultural capital'. Particularly threatened are the cultural assets which constitute our urban heritage – the cores of historic, but still vibrant, cities and towns" (Engelhardt n.d.: 33). A similar approach is adopted by supporters of heritage conservation. They highlight heritage value in terms of acclaimed citizenry and economic enterprises and of initiatives required for the conservation of monuments. Thirdly, political scientists discuss prerequisites for the vibrancy of a conflict city (a city that has faced violence on communal lines), such as a need for mediation processes, so that negative consequences of exclusionary identity-producing and reproducing processes are able to restore complacency and vibrancy that existed in the past, and the proactiveness of the state to control the means and deployment of violence (Chandhoke 2009: 99); the social scientists establish the centrality of civil society in the democratic set-up for growth and increased vitality of a city.

A shop in Manek Chowk (Ravish Shah / Varsha Bhagat-Ganguly)

The outlook to the walled city of Ahmedabad in this paper pitches somewhere in between these three types of discourses, focusing on how "formal" and "informal" spaces, cultures, and civil actors interact to reproduce changed, hybrid cultures and between vibrant and volatile phases. The impact of some government policies on citizens is unanticipated. The article describes how sustenance of employment due to expansion and/or decline of industries has impacted economic life as well as habitation patterns, and how the perception and aspirations of people change after a major human conflict, such as communal riots. What role does space constraint and technology play in the physical shifting of financial institutions like the Stock Exchange and the Bullion Market, and how are people's lives affected – that is, how do modernisation and selective urbanisation abandon the old, overlook the poor and marginalised, and remain indifferent to susceptible processes that do not challenge governance or political domains? Sometimes, informalisation creeps in through people's initiatives, ignoring the rule of law. A series of collective violence with communal and caste overtones during the 1960s and 2000s has brought in silent hostilities resulting in a change of settlement (habitation and shops) patterns: segmentation of houses on religious lines, vitality and viability of commercial ventures, inactivated peace-building processes and actors, and a ruptured social fabric. Antisocial and illegal elements have been gripping economic and educational activities since the 1960s, in the form of gambling in different ways, bootlegging items for intoxication, smuggling consumer items and selling them on the black market, and collecting protection money.

The planned walled city of the past: Not in vogue!

There are many visible differences between the walled city on the eastern part and on the western part of the city. The use of space for residential and commercial purposes is foremost: narrow roads, wall-to-wall shops, and residences, which do not necessarily appear to be in well-organised shape or size within the walled city. Every area of the walled city in the past and present is distinctly known for its commercial activity, such as Ratan Pol and Dhalgar Wad as hubs for readymade garments and shops selling saris, and Manek Chowk,[4] almost at the centre of the walled city, offering a range of items – steel and copper utensils at wholesale price, silver and gold jewellery, fruits, vegetables and tea, and seasonal items like fire crackers, kites, and thread reels.

Manek Chowk was considered important for various reasons until the mid 1980s: the purchase of certain items in bulk and in retail, the prosperity of commercial hubs, the architectural richness of the houses, and the celebration of festivals. Until the last decade, many citizens preferred to buy different commodities and products from the markets of the walled city. Gradual decline in clientele, income, and interactions with people coming from different parts of Ahmedabad is observed by most vendors and shopkeepers of this area.

Mixed settlement with shop on the ground floor and residence on the first floor (Ravish Shah / Varsha Bhagat-Ganguly)

The importance of the growth of local markets in the residential areas of western Ahmedabad is believed to be one of the major reasons for the decline in sales and clientele. One of the shopkeepers of the walled city introduced a cultural angle, saying that "earlier we had relations of hearts; now practicality drives our lives. […] Though we provide quality products at cheaper rates here, people lack 'trust' in us and prefer to buy from a 'known face' of the local market at a higher price. […] Earlier our clientele was family-based, and every generation of the same family was continuing its patronage. Such relations no longer exist." He further added, "Now many people prefer buying from a shop, where the shop owner belongs to their community. […] Our sales have reduced considerably with such developments." This sharing reveals a range of issues, along with changes in the buying patterns of a consumer, decline in clientele and sales, community or religious sentiments, and the question of the commercial viability of a business. The notion of "practicality" overrules the "relations of hearts". Traditional business hubs of the walled city have lost their relevance in times of "mall culture". The political class and ruling political parties seem to be indifferent to such changes. There is a form of informalisation, wherein the walled city is "not vibrant", and "restricting" conveys "neglect" of the walled city area. Such sentiments, changed economic behavioural patterns, and the absence of formal regulating mechanisms reflect a shade of informalisation at the level of various institutions and settlements.

In Manek Chowk, the settlement patterns as well as the ownership of shops have now changed. This area had actually preserved old settlements after surviving large-scale communal riots in 1969, 1985, 1987, and 1992. Slowly, ownership patterns changed in the late 1990s, and riots in 2002 changed it significantly. Muslims had negligent presence in the jewellery market of Manek Chok until the 1990s. As such, following the riots in the 1980s, the ownership of shops changed among Hindu shop owners. One of the shop owners informed us that "I was a craftsman [jewellery making] in 1980 and was working on jobs given by these shop owners. I bought a shop in the late 1980s and also held a place where I was working as a craftsman. In the 1990s, many craftsmen from the State of West Bengal migrated here. After the 2002 riots, Muslims started buying these shops. Now it is an area with changed ownership of shops".

The old Stock Exchange, Manek Chowk (Ravish Shah / Varsha Bhagat-Ganguly)

The Stock Exchange of Ahmedabad, established in 1839, was originally located in Manek Chowk until the mid 1980s. A small area in front of the Stock Exchange used to be very vibrant during the daytime, as the buying and selling of shares were performed manually. Now this area is used as a parking area during the day and a fast-food market during the night. Several handcart stalls occupy this area to entertain visitors for fast food until midnight. After the closure of the textile mills during the 1960s and 1980s, the mill workers were engaged in petty jobs and self-employment, selling assorted items. This was the beginning of the impoverishment of many settlers of the walled city of Ahmedabad. One, a cobbler, informed us, "I have been sitting here [on a pavement] outside a *pol* [barrack-like settlement/chawl for community living] near Manek Chowk. My income has continuously reduced. […] Now I sit here because there is nowhere else to go. I'm old." He shared stories about the mechanisation and modernisation in shoemaking and the loss of livelihood. Small vendors' sources of livelihood had shrunk and skills were no longer recognised, leading to their impoverishment.

Walking along the heritage track in the eastern part of the walled city is one of the activities that promotes the heritage value of architecture. This is organised by the Ahmedabad Heritage Foundation (AHF). AHF has adopted bird feeders on this route. With the popularity of this walk, the destruction of old houses has been under control to some extent. This is a different type of philanthropic activity, promoted by civil actors and approved by an authority – Ahmedabad Municipal Corporation (AMC) (Ahmedabad 2011: 65).

This walk has attracted tourists, but the revenue earnt from this activity has not been reported. Thus, such philanthropic activity and citizen's initiatives have largely remained informal.

Changed human geography in the spatial segmentation

There are 600 *pols* in the walled city (Ahmedabad 2011). Usually, people from one caste (community) reside in a *pol*. Every *pol*'s plan and construction is distinct and different from others. A *pol* is also known as a distinct vocabulary, such as *sheri*, *khancho*, *pado*, or *khadki*, which reflects the organisation of its residences or buildings. There are different types of buildings or residences, and each is named differently – for example, a *dahelo* is a residence with gated settlements, a cluster of three to five houses, and *haveli* has an architecture style similar to a mansion. Most settlements are densely populated; every residence shares walls with other residences. They appear unevenly organised because each *pol* (or settlement) includes a single multistorey building, and a series of them may or may not have a *dahelo* or *haveli*. Thus, compared to planned constructions and buildings on the western side of the city, the walled city appears unplanned with informal settlements.

The first cooperative housing society in the walled city – Patel Society, established in 1937 (Ravish Shah / Varsha Bhagat-Ganguly)

In 1927, the first cooperative housing society was established, named Pritam Nagar. The first cooperative housing society in the walled city was established in 1937, named Patel Society. Since the 1950s, western Ahmedabad has been developed, and many educational institutions/universities, hospitals/health care units, and libraries were set up with philanthropic funds. In contrast, there is no public place in the walled city that is part of modern planning, such as a park, public library, public museum, or a theatre/multiplex (building) for entertainment or commercial activities.

A settlement in the Khanpur area (Ravish Shah / Varsha Bhagat-Ganguly)

The planning and construction of *pols* in the eastern areas are different from the northern walled city. Similarly, community living and habitation patterns differ in both the areas. The walled city was affected the most after a series of communal riots in the 1980s, which resulted in changes in habitation patterns there. Some policies or development plans of the government were instrumental in the continuation of the informalisation of the walled city. For instance, Ahmedabad Urban Development Authority (AUDA) permitted a higher floor space index (FSI), which gave greater rise to the development of high-end residential complexes. These resulted in a hike in land prices, gated communities, and the attraction of greater investment; it also created a contrast to the eastern part of the Sabarmati River. There was no planning or no proactive step taken to deal with the walled city and the industrial areas in eastern Ahmedabad dealing with high-density population and low land and property prices. Thus land- and property-related economic transactions within the walled city areas remained in the "informal" domain.

The Government of Gujarat brought in an act – The Gujarat Prohibition of Transfer of Immovable Property and Provisions for the Protection of Tenants from Eviction from Premises in Disturbed Areas Act, 1991. Under this act, a list of disturbed areas was announced, and property transaction was prohibited. Selling and buying property continued despite a legal mandate under this act as well as the policy of AUDA. If communal and caste-based violence is one of the causes for the inaction of this act, FSI and other policies regarding the land use and growth of the walled city are major causes for bringing in spatial segmentation.

High-rise buildings in the Khanpur area (Ravish Shah / Varsha Bhagat-Ganguly)

The Khanpur area in the north-western part of the walled city was one of the exemplary areas of cohabitation. Until the beginning of the twenty-first century, people of different faiths – Jews, Parsees, Muslims, and Hindus – were residing together. At present, most Jewish and Parsee families have shifted to the western part of Ahmedabad, and Jains have bought up properties. These Jains have migrated from northern Gujarat. They are cloth merchants and own shops in cloth markets inside the walled city areas, mostly located in the central and eastern parts. This area is now inhabited by Jains, Muslims, and Hindus. Cohabitation prior to the 1990s has changed. Many *pols* no longer remain one-caste-based residential areas, and newly built multistorey buildings also have not remained one-caste- or community-based buildings.

A deserted, burnt-out housing unit in the Khanpur area (Ravish Shah / Varsha Bhagat-Ganguly)

In many *pols*, some buildings are in a dilapidated condition. One *pol* – Vadvali Mehtani Pol – now hosts Jains, Hindus, and Muslims. At the entrance of this *pol*, a *Derasar* (a Jain place of worship) is located on the right side while ruins of a building are seen on the left. After crossing a couple of houses, a *dahelo* comprising four houses can be seen. After entering this *dahelo*, Gokuleshjini Haveli (a Hindu-sect place of worship) is on the right side while three houses are on the left side. Of two one-storey houses, one house looks unusable and another was locked. One house on the first floor is in a dilapidated condition. Branches of a pipal tree are hanging out from a wall of this house, hinting that this house is unusable. Several such *dahelos* and houses are seen in every part of the walled city. Such are the informal settlements, which are old, not maintained, are in a dilapidated condition, are missing the spirit of cohabitation, and have access to very minimal facilities, such as only two hours of water supply a day, internal roads that are not maintained by the municipality, and not being connected with public transport facilities. The costs of communication and electricity are borne by the residents.

A house in a dahelo of Vadvali Mehtani Pol / Dilapidated house in a dahelo of Vadvali Mehtani Pol (Ravish Shah / Varsha Bhagat-Ganguly)

3 This triad is made up by Christian Schmid (2008); he explains the moments of the triad as "material social practice", "language and thought", and the "creative, poetic act" (quoted in Wolf/Mahaffey, 2016: 60).

4 The areas Ratan Pol, Dhalgar Waad, and Manek Chowk are south-west of the walled city. Ratan is the name of an eminent citizen, and a *pol* is usually inhabited by families belonging to one caste or community. Dhalgar is an occupational category, and Waad refers to a boundary. This area is on the boundary of the walled city, next to *Teen Darwaja* (Three Gates).

Informalisation in the employment sector

Regarding labour, the first phase of informalisation took place in 1971–1981. In 1981, of an urban working population of 750,000, around 500,000 were engaged in the informal sector (Mahadevia et al. 2014: 10). The lack of diversification in Ahmedabad's industrial base after the setback suffered by the textile sector has been mainly responsible for the informalisation of employment in the city. The actual number of workers who lost their jobs as a result of the closure of the mills was nearly 67,000 by 1997 (Bhatt 2003: 3).

Manual collection of garbage in a handcart (Ravish Shah / Varsha Bhagat-Ganguly)

Some of the workers of the closed textile mills found employment in small-scale units, in the informal sector, which led to a decline in their incomes. There has been a significant increase in self-employment since the early 1990s. The outsourcing of manufacturing work led to the growth of the informal sector and the employment of many more women for home-based work, such as ready-made garments and food items. These families live inside and around the walled city areas. Most of the tertiary sector enterprises were small-sized, indicating the presence of a large informal sector, with the exceptions of public administration, defence, and social services (Mahadevia et al. 2014: 11). The walled city areas did not benefit with the emergence of petrochemical and pharmaceutical enterprises, automobile industries, agro and food processing, and chemical and dying factories, which led to social and spatial transformation in peri-urban areas of Ahmedabad city.

The eastern side, outside the walled city, was expanded with several industrial units until the 1980s; the western side of the city grew faster and expanded her limits with a more modern infrastructure and premier private enterprises than the eastern part. This is illustrated with the compound annual growth rate (CAGR): the Ahmedabad Urban Authority (AUA) reported a higher CAGR compared to the area belonging to AMC. The walled city was the largest part of AMC during 1971 and 1981 (Mahadevia et al. 2014), and this trend continues until today.

Fragile social fabric and changed values

A college teacher who had lived in the walled city until 1969 shared that the 1960s were very volatile for the walled city. Major changes were observed in people's lives, in educational institutions, in moral values, and in cultural activities. In the early 1960s, the numbers of antisocial activities had increased in different forms, such as gambling, the smuggling of foreign goods, and the bootlegging of intoxicants. These activities were organised by just a few people (popularly known as *dadas*). These *dadas* have started controlling people's lives in various ways – providing patronage, collecting protection money from vendors and shop owners, and so on (Kadia 2010). Their patronage provided the courage to college-going students to such a level that during examinations, students started threatening lecturers in the college. He shared that once a *dada* came to the college during an examination and threatened him and put a knife on his neck because he did not allow the students to use chits to copy the answers.

Many educational institutions had turned commercial, away from their original mandate of catering high-quality, high-value education. Philanthropic funds were no longer used for the walled city areas. Violence along communal lines in 1969 impacted sociocultural life to a great extent – mutual trust, exchange of food, living habits, use of space, and doing business. The segmentation in spatial and commercial activities has now reached a division on religious lines. Though these divisions are apparent, people do not talk about it overtly; some Hindus shyly say, "Until Modi [chief minister of Gujarat during 2001 to 2014 and prime minister since 2014] is in rule, there is nothing much to worry about." Some Muslims prefer to keep quiet or highlight the struggle for survival and divert the issue towards corruption, lack of governance, and/or problems of a deteriorating economy.

Informalisation continues

A few indicators in finding prosperity, potentials for development, and enhanced urbanisation and growth could include urbanisation policy, legal provisions, governance mechanisms, initiatives by public figures, financial institutions, public places, commercial hubs, revenue generation, number of affluent households, and so forth. As such, there is dearth of data about the indicators mentioned here, and therefore the dismal state of the walled city is described through the process of informalisation.

In most areas of the walled city, several settlements/buildings are in a dilapidated condition. Despite legal restrictions, property selling and buying transactions continue. The houses which are not saleable continue to dwindle and be neglected. Changes in human settlements have continued in an informal way, beyond any legal mandate.

Government-run school with no playground (Ravish Shah / Varsha Bhagat-Ganguly)

The negligible presence of public spaces and ventures reveals different shades of informalisation. The government schools have no playground. Apparent spatial constraints and the fragile social fabric of the walled city conveys that she has the least potential for infrastructure development, the least avenues for bringing in newer financial or commercial institutions and ventures on a sustainable basis. Such a feeling of restrictiveness has led to the neglect of the walled city, especially on the count of formal processes for growth and development and by the drivers of growth and expansion.

About Ahmedabad (2017): Amdavad Municipal Corporation. URL: http://ahmedabadcity.gov.in/portal/jsp/Static_pages/introduction_of_amdavad.jsp (accessed 10 February 2017).

Anonymous (2010): Ahmedabad Next: Towards a World Heritage City. Ahmedabad: Bennett, Coleman & Co. Ltd.

Mihir Bhatt (2003): *The Case of Ahmedabad, India*. URL: http://www.ucl.ac.uk/dpu-projects/Global_Report/pdfs/Ahmedabad_bw.pdf (accessed 10 February 2017).

Neera Chandhoke (2009): "Civil Society in Conflict Cities", in: *Economic and Political Weekly*, 44, 44, pp. 99–108.

Richard Engelhardt (n.d.): *The Management of World Heritage Cities: Evolving Concepts, New Strategies*. Key note speech 2: URL: https://www.coursehero.com/file/17652975/Week-3-Engelhardt-The-management-of-world-heritage-cities-evolving-concepts-and-new-strategies-200/ (accessed 10 March 2017).

Chandrakant Kadia (2010): *Amaro Shekhno Paado*. Ahmedabad: Gurjar Prakashan.

Namesh Killemsetty (2013): *Understanding the Evolution of Slums in Ahmedabad through the Integration of Survey Data Sets*. URL: https://www.researchgate.net/publication/308146412_Understanding_the_evolution_of_slums_in_Ahmedabad_through_the_integration_of_survey_Data_sets?enrichId=rgreq-2d33165c901edf2219a89359569c24e7-XXX&enrichSource=Y292ZXJQYWdlOzMwODE0NjQxMjtBUzo0MDY3Mjg4NTMyMTMxODVAMTQ3Mzk4MzEyMzcwNw%3D%3D&el=1_x_3&_esc=publicationCoverPdf (accessed 11 February 2017).

Darshini Mahadevia/Renu Desai/Suchita Vyas (2014): *City Profile. Ahmedabad*. CUE Working Paper 26, September. URL: http://cept.ac.in/UserFiles/File/CUE/Working%20Papers/Revised%20New/26CUEWP%2026_City%20Profile%20Ahmedabad.pdf (accessed 10 February 2017).

Debashish Nayak (n.d.): *Getting the City Back to the People. Municipal Initiative in Heritage Conservation. The Case of Ahmedabad*. URL: http://www.cmdachennai.gov.in/pdfs/seminar_heritage_buildings/Heritage_Conservation_in_Ahmadabad.pdf (accessed 17 February 2017).

Debashish Nayak (2003): *Revitalising Our Walled Cities*. URL: http://www.india-seminar.com/2003/530/530%20debashish%20nayak.htm (accessed 17 February 2017).

The Walled City of Ahmedabad. Study Area. URL: http://shodhganga.inflibnet.ac.in/bitstream/10603/45447/9/09_chapter%203.pdf (accessed 10 February 2017).

Garrett Wolf/Nathan Mahaffey (2016): "Designing Difference. Co-Production of Spaces of Potentiality", in: *Urban Planning*, 1, 1, pp. 59–67.

Achyut Yagnik/Suchitra Sheth (2011): *Ahmedabad. From Royal City to Megacity*. New Delhi: Penguin Books.

The Good, the Bad, and the Ugly: Cairo's Informal Urbanisation, Vanishing Agrarian Lands, and the Role of Planners / Charlotte Malterre-Barthes

View over the informal area of Ard-el-Lewa, Cairo, Egypt (Lorenz Bürgi)

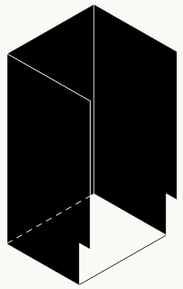
Charlotte Malterre-Barthes is an architect and urban designer, director of the Master of Advanced Studies in Urban Design at the Institute of Urban Design (Department of Architecture, ETH Zurich). Graduated from the ENSA Marseille, TU Wien, and ETH Zurich, Charlotte is principal of the urban design practice OMNIBUS. She is currently completing her doctoral dissertation on the correlations between food systems and the built environment in Egypt. She edited the award-winning book *Housing Cairo. The ~~Informal~~ Response* (Ruby Press, Berlin, 2016). Charlotte is a co-initiator and member of the Parity Group, a grass-roots movement within the Department of Architecture at ETH Zurich challenging the gender imbalance in architectural practice and in academia.

Informal economies, fast-growing squatter settlements – in many cases the majority of a city's population – had simply been ignored.[1]

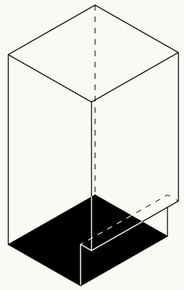
Despite its limited fertile land of approximately 3 million hectares, Egyptian agriculture is extremely productive, with harvests two or three times a year. However, as much as around 10,000 hectares of arable land disappears annually (IRIN 2011). While there are various causes for this, such as high salinity and desertification, urbanisation is the most conspicuous form of permanent loss of cultivated land. Since Hosni Mubarak's economic liberalisation policies, agricultural land has been lost to urban expansion at an accelerating rate within the Nile Delta, the Nile Valley, and the Greater Cairo Region. This growth onto farmland occurs illegally at the fringes of urban agglomerations. New settlements are built without recourse to zoning or construction regulations. Local authorities have enacted various urban planning measures in an effort to divert Cairo's growth to new towns on desert land (Stewart 1996: 459–480). The Ring Road, designed in the 1970s' Master Plan, was intended to restrain urban expansion and limit encroachment on agricultural land through the creation of a physical barrier (Gorgy 1984: 178). These measures have largely proven unsuccessful; as of today, 60 per cent of the Cairenes live in informal housing settlements, marked by incremental construction, offering various housing typologies, from self-built, low-rise structures to semi-professionally built, fifteen-storey towers (Bell 2009: 350). While lacking services and public infrastructure, informal settlements in Cairo are nonetheless successful in generating dense and affordable housing for the popular classes (Angélil/Malterre-Barthes 2016). Theses mechanisms of space production offer a paradigmatic case to reassess the manner in which the discipline of architecture reacts to forces of urbanisation operating beyond the usual legal framework. Rapid global urban growth alters conventional ownership structures and urban forms and fundamentally questions the validity of formal planning and the relevance of designers. Worldwide, low-income populations have not waited for planners to solve their housing crisis and have taken the matter into their own hands. Their answer to the shortcomings of political and governmental structures is inventive, resourceful, and ingenious. Architects are excluded from these informal modes of construction and their speculative real-estate spinoffs.

1 Stephen Graham and Simon Marvin, *Splintering Urbanism. Networked Infrastructures, Technological Mobilities and the Urban Condition* (London: Routledge, 2009), 129.

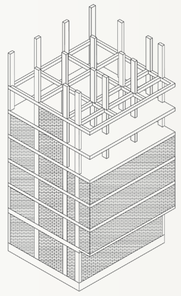
Three blind facades and one street facade



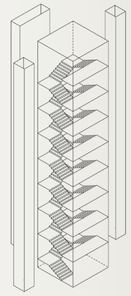
Entire plot occupation, after deducting space for the street



Concrete structure with brick infill



Ventilation shafts and single staircase



Prototypical characteristics of informal construction: three blind facades and one street facade. Entire plot (qirat) occupation after deducting space for the street, concrete structure with brick infill, ventilation shafts, and single staircase (B. Falcao, G. Dimitriades, and S. Terada, in: Marc Angélil and Charlotte Malterre-Barthes (eds.), Housing Cairo. The ~~Informal~~ Response, Berlin: Ruby Press, 2016)

The good

Home to a majority of the 20 million inhabitants of the Egyptian capital, so-called informal housing units are up-to-fifteen-storey concrete and brick-infill constructions built without permits, mostly on former agrarian land. While the phenomenon is not new, the pace of illegal constructions on fertile areas at the capital's fringes has accelerated since the 2011 revolution. In *Understanding Cairo*, urban researcher David Sims claims that "in 1950 there were virtually no informal settlements around Cairo" and that the first developments on agricultural land appeared in the early 1960s following Gamal Abdel Nasser's industrialisation policies (Sims 2010). State housing programmes proved unable to cope with the ensuing rural migration. A decade later, housing clusters were identified spreading incrementally on privately owned farmland in close proximity to existing rural villages just north of Cairo. Illegal urbanisation on the city's edges continued to thrive under Anwar Sadat's and Hosni Mubarak's terms in office, fuelled by market liberalisation policies and remittances from Egyptian male labourers in the Gulf. After the January 2011 events, illegal developments augmented—a possible consequence of the power vacuum left following the collapse of the ruling regime.

The heart of the Egyptian economy and institutions, Cairo has drawn rural migration from Upper Egypt and the Nile Valley constantly since the 1970s. While Nasser's welfare state policies saw public housing programmes and promulgated rent-control laws, construction of mass housing came to a standstill after the 1967 war with Israel. Soon after, evacuees from the Suez Canal Zone and Egyptian workers from the Gulf amplified the housing demand in Cairo (Sabry 2016: 252–255). Under Sadat, with limited national expenditures dedicated to public housing, the task of housing the population was transferred to private investors, which did not respond to the needs of lower-income families. For these, the formal market remains inaccessible, and housing in informal areas is the only affordable solution. Informal housing is thus the logical response to a lack of both public and private solutions for a large majority of Egyptians. Architects are largely absent from this mass production.

Contrary to what the term "informal" suggests, the mechanisms of urban informality follow rigorous rules that repeat throughout the Nile Delta and the Valley. Urban expansion appends to property lines of the Egyptian *feddan* (El Kadi 1990). This narrow strip of farming land is 100–300 metres long and 6–17 metres wide, framed by irrigation canals, which eventually become alleyways and streets, "urban canyons", as the area is occupied.[2] Farmers and landowners subdivide their plots in direct collaboration with local brokers, who act as mediators to minimise bureaucracy and help bypass government restrictions. Changing land use from agriculture to informal housing generates a 200 per cent profit, which in itself proves to be a powerful incentive to sell one's property.
A single *feddan* is divided and sold in twenty-four equal plots, with the size of square lots (called *qirat*) ranging from 80 to 180 square metres. Farmers of modest means, urban landlords, or urbanised peasants can sell their plots by single *qirats*.
Clients are rural migrants or low-paid urban workers from the city centre of Cairo. They either buy a completed unit, hire a local contractor to build a new one, or undertake the construction themselves with help of local workers. Savings, remittances, collective pooling of resources within an extended family, and personal loans are the main sources of financing. Formal financial institutions are rarely involved. The construction process is rapid, and while before 2011, several methods of concealing construction from government control existed (such as night work, roadblocks, secluding walls, sentinels), it is now blatantly done and as quickly as one floor per month.[3] The buildings are always in reinforced concrete poured on site, with red brick infill panels. Foundations are a maximum of 2 metres deep. Pillars on the last floor anticipate further construction. Initially, the buyer might request that a contractor erect a single-storey building, one room of which the buyer occupies, while the other rooms are rented to other tenants. After saving money for eight to ten years, another floor might be added, followed eventually by a third. This practice has evolved since speculative developers or a group of small investors may build fifteen-storey towers at once. Due to the subdivision patterns, one single building (based on the *qirat*) ranges from 80 to 180 square metres. Buildings occupy the entire plot, save for 1.5 metres left for the streets, with one street facade and three blind-side ones. Interior shafts along the facades and in the interiors of the buildings provide natural ventilation and light. The *qirat* typology is replicated *sine fine* along *feddans*, resulting in an aesthetically, urbanely, and architecturally homogeneous environment.

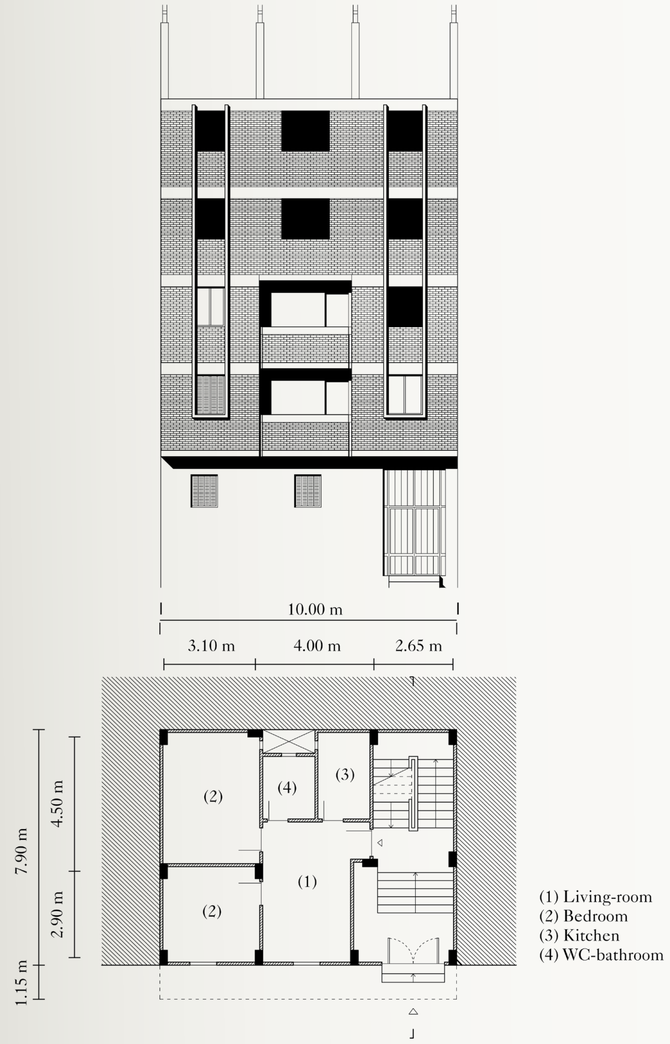
In contrast to the authorities, which consider informal districts as an eyesore, many urbanists and researchers have expressed appreciation for the urbanism generated by these protocols. In "Advantages of Living in Informal Settlements", researcher Dina Shehayeb listed self-sufficiency, walkability, participation, sense of belonging, safety, social solidarity, and community building (Shehayeb 2009). All these elements belong to qualities designers are aiming for when planning an ideal urban district. The spatial qualities are, however, less recognised and acknowledged. The urban morphology, generated by the previous agrarian form is, for instance, well adapted to the local climatic conditions. The *feddan* shape persists in the so-called "urban canyon", resulting in narrow streets with high buildings, which provide shade.
The long corridor-like street induces ventilation and wind circulation. It allows an efficient social control over the street, with only two entries for vehicles or individuals foreign to the area. The floor plan of the building, confined within the square shape of the *qirat*, is compact and well organised.
All in all, it appears that informal areas offer an efficient solution to housing for low-income populations.

2 The *feddan* is a unit of area used in Egypt, Sudan, and Syria. One *feddan* = 24 *qirat* = 60 m × 70 m = 4200 m² = 0.42 hectare = 1.038 acre.
3 Field research by Charlotte Malterre-Barthes, Mariotiyah, Greater Cairo, April 2013.

The bad

State authorities and many Egyptians abhor informal areas. In 2010, scholar Sabry Hafez wrote a virulent critique, claiming that extreme density and "over-crowding […] has resulted in the collapse of normal social boundaries. […] Incest has become widespread. Previously eradicated diseases such as tuberculosis and smallpox are now epidemic" (Hafez 2010: 48). While such accounts are overly dramatic and one-sided, other voices have warned of romanticising the areas.
Omar Nagati and Beth Stryker alert that "the slippery slope begins with acknowledging private initiatives, glorifying the self-built environment and the capacity of local communities to mobilize their own resources in the absence of public services […] and, in so doing, perhaps unintentionally absolving the state of its responsibility towards its citizens" (Nagati/Stryker 2016: 258). Additionally, insufficient water and sewage networks, poor road conditions, absence of transportation, erratic garbage collection, and so on are limitations to those living in informal areas. Besides, the entirely private character of this urbanisation mode leaves little room for public, green, or simply unbuilt space, which is virtually absent in these areas, save for plots awaiting construction and remaining agrarian fields. Furthermore, speculative practices have initiated changes in the production processes of informal housing. Evolving from self-built, low-rise structures to semi-professionally built, fifteen-storey towers, the shift to a profitable mode of illegal construction bordering on neoliberal speculative schemes is noticeable. Initially, housing structures followed a simple typology of concrete frames and brick infill, with street patterns registering agrarian subdivisions. This corresponds to what Sims identifies as the "classical informal", characterised by 140 to 190 square metres of simple brick-and-concrete structures of one and up to seven floors—the maximum acceptable height to be reached without a lift (Sims 2010: 105). This is currently still the prevalent typology in these areas. At the other side of the spectrum, speculative one-off towers appeared in the mid 1990s, mainly at the fringes of Cairo. The tower typology has a much larger footprint, from 250 up to 450 square metres, with larger apartments and several units per floor. Unlike the plain apparent brick and concrete aspect of the simple types, towers are plastered and painted in bright colours to facilitate selling and rental (Kouvari/Jung 2016: 76–87). Buildings go up to fifteen floors and, are equipped with lifts. After the January 2011 events and the collapse of the regime, contractors grew confident and more upfront with speculative illegal constructions. High towers with balconies and ornamental facades appeared along Cairo Ring Road. Units bought as securities on the market within the framework of a grey economy, these dwelling have owners, yet they often remain unoccupied, materialising their speculative nature. This new typology shows the penetration of market forces with larger investments operating in a neoliberal mode, with contractors and investors engaged in an underhanded production of real-estate stock to be sold illicitly but nonetheless in plain sight. Informal construction at this stage of development points to the manner in which capital and financial forces have penetrated into what was normally a small-scale and self-built form of urban production. What emerged in the 1970s as the popular response to public incapacities to provide affordable housing solutions to lower classes in Egypt has evolved into a classic market process, tending towards formal modes of real-estate investment.

This phenomenon has exacerbated agrarian land loss. At present, 83 per cent of Cairo's informal settlements stand on former fertile areas. Agricultural land is a scarce resource in Egypt, with 3.28 million hectares available for food production (Hamdallah 2002). Most of these irrigated fields are located along the Nile Valley, which is also home to about 80 million Egyptians (Al-Ahram Weekly 2013). The Egyptian population has centupled since 1910, and the amount of arable land available has decreased as a result. Currently, there are 0.05 hectares per capita (down 75 per cent since 1910). Egypt has the least agricultural land per person of any nation in Africa and is the world's largest wheat importer—an estimated 11.5 million tons in 2011 (FAO 2012). Despite consistent increases in domestic production, the country relies heavily on imports from the Americas, Europe, and the former Soviet Union to satisfy its domestic food needs, making it vulnerable to high global prices. As 17 per cent of the Egyptian population suffers from food insecurity, the government runs an important national subsidy system to support social equity and political stability. Subsidised *baladi* bread is accessible to all and sold at five *piasters* a loaf (less than a penny in American currency), a price unchanged since 1989.
Yet, 77 per cent of this subsidised wheat must be imported, costing the country the equivalent of the total revenues generated by the Suez Canal (Ahmed/Bouis/Gutne/Löfgren 2002: 14). Meanwhile, much of the country's arable land is devoted to potatoes, cotton, and citrus—foreign experts and economic institutions controlled by industrialised nations have pushed Egypt to produce cash crops for export. Years of



Abdhullah's single family house, elevation and ground-floor plan, Ard-el-Lewa, Cairo (Marc Angélil and Charlotte Malterre-Barthes (eds.), Housing Cairo. The ~~Informal~~ Response, Berlin: Ruby Press, 2016)

economic reforms, market liberalisation, and privatisation have also undermined the historical welfare state. Although Egypt has integrated into the world economy, the benefits prophesised by the World Bank and its ilk have not materialised for farmers. Rural development has been modest at best. Public and private funds have been diverted to "new lands" and foreign investment steered into projects such as Toshka, a massive system of agribusiness infrastructure in the desert of Upper Egypt. An official representative said that 30,000 *feddans* have been lost to construction since the revolution while an independent expert estimated the number to be closer to 400,000. The incongruity of these numbers highlights the lack of data and reliable studies of the phenomenon (Kimmelman 2013). Experts' opinions differ not only on the amount of land lost but on its significance too. Some ironise about "the unacceptable loss of Egypt's precious agricultural land" and argue that the density of informal housing is efficient, that land reclamation is effective, and that the loss of agrarian land has been compensated for (Sims 2010: 135). Most researchers and professionals agree on the importance of the problem, but the actual dangers posed to the country are rarely formulated.

The ugly

Neither legislation prohibiting construction on agricultural land nor schemes to divert urbanisation have been able to curb the loss of fertile land to urban development. Yet, persistent urban growth shows that while lacking services and public infrastructure, informal settlements are nonetheless successful in generating dense and affordable housing for the popular classes. One would suggest that some degree of planning could reconcile both, as early informal urbanisation processes show. In 1990, a group of Upper Egyptians secured plots of agrarian land at the edge of the upscale neighbourhood of Mohandesseen in Cairo. The land was bought through a *gamaya*,[4] a savings-and-credit association, for two Egyptian pounds per square metre (at the time, about US$5) with a legal subdivision license.[5] The *gamaya* hired engineers to draw a street grid complying with municipal rules (street width of 10 metres for main roads and 8 for secondary roads), leading to an airy urban fabric with comfortable public space. While without having any positive impact on agrarian land, this case shows that even a low degree of planning can be beneficial. However, save for a few intrepid practices like CLUSTER, Takween, or Megawra, architects have largely remained at bay (CLUSTER 2013). There are possible explanations for this "ugly" lack of involvement from the planners' side. It might be because the pace of the ongoing urbanisation is too fast for design professionals to catch up, and entire districts are being built within a few months. It might also be that architects have abandoned a field where construction is *de facto* illegal and where little profit is to be made and prefer to operate within corporate frameworks. Investigating the making of informal housing in Cairo forces us to question the relevance of the profession in a global context of rapid urbanisation. To design the city, regardless of its legal status, still remains the very task of architects and planners, and it comes with a responsibility embedded in the current state of the world.

4 A *gamaya* is a group saving association, a social mechanism that relies on collecting, each month for one or two years, a fixed amount of money from each member. A group leader collects the fixed shares and holds the fund. The number of members pooling their money ranges from as few as six to as many as forty, and the money collected is paid out as lump sums in rotation to each member of the group, allowing them to finance major expenditures (land purchases, weddings, education, etc.). A rotating savings-and-credit association (ROSCA) is based on balanced reciprocity and is a popular form of informal finance in which all members are both savers and borrowers.

5 At the time of the survey (2015), the pound was worth roughly US$0.12.

Al-Ahram Weekly (2013): *Egyptian Population to Reach 92 Million by March. Capmas*. URL: http://english.ahram.org.eg/NewsContent/3/12/65717/Business/Economy/Egyptian-population-to-reach--million-by-March-CAP.aspx (accessed 15 March 2017).

Marc Angélil/Charlotte Malterre-Barthes (eds.) (2016): *Housing Cairo. The ~~Informal~~ Response*. Berlin: Ruby Press.

Jennifer Bell (2009): "Land Disputes, the Informal City, and Environmental Discourse in Cairo", in: Diane Singerman (ed.): *Cairo Contested. Governance, Urban Space, and Global Modernity*. Cairo, New York: American University in Cairo Press, pp. 349–367.

CLUSTER (2013): "Learning from Cairo. Global Perspectives and Future Visions", in: Beth Stryker/Omar Nagati/Magda Mostafa (eds.): *Learning from Cairo*. Cairo: The American University in Cairo Press, Tahrir Campus.

Galila El Kadi (1990): "L'articulation des deux circuits de la gestion fonciére en Egypte. Le cas du Caire", in: Philip Amis/Peter Cutt Lloyd/Institute International African (eds.): *Housing Africa's Urban Poor*. Manchester, New York: Manchester University Press for the International African Institute, pp. 103–117.

Food and Agriculture Organisation (FAO) (2012): "Country Brief on Egypt", in: *Global Information and Early Warning System on Food and Agriculture* (2013). Rome: FAO GIEWS.

Michel Gorgy (1985): "The Greater Cairo Region. Land Use Today and Tomorrow", in: Ahmet Evin/Architectural Transformations in the Islamic World: *The Expanding Metropolis. Coping with the Urban Growth of Cairo*. Singapore: Concept Media/The Aga Khan Award for Architecture.

Stephen Graham/Simon Marvin (2009): *Splintering Urbanism. Networked Infrastructures, Technological Mobilities and the Urban Condition*. London: Routledge.

Sabry Hafez (2010): "The New Egyptian Novel. Urban Transformation and Narrative Form", in: *New Left Review*, 64, pp. 42–62.

Ghassan Hamdallah (2002): *Land Resources Information Systems in the Near East*. Cairo, Rome: Food and Agriculture Organisation of the United Nations, 92-5-104860-6. URL: http://www.fao.org/3/a-Y4357.pdf (accessed 13 April 2017).

IRIN, Humanitarian News and Analysis (2011): "Egypt. Desertification Threat to Local Food Production", in: *Humanitarian News and Analysis*. URL: http://www.irinnews.org/report.aspx?reportid=93193 (accessed 5 March 2015).

Michael Kimmelman (2013): "In Cairo. Rethinking the City from the Bottom Up", in: *The New York Times*, 27 April 2013.

Maria Kouvari/Heechul Jung (2016): "A New Vernacular. Typology, Construction, and Aesthetics", in: Marc Angélil/Charlotte Malterre-Barthes (eds.): *Housing Cairo. The ~~Informal~~ Response*. Berlin: Ruby Press, pp. 76–87.

Omar Nagati/Beth Stryker (2016): "The Danger of Romanticizing Informality", in: Marc Angélil/Charlotte Malterre-Barthes (eds.): *Housing Cairo. The ~~Informal~~ Response*. Berlin: Ruby Press, pp. 258–261.

Sarah Sabry (2016): "An Introduction to Informal Housing in Cairo", in: Marc Angélil/Charlotte Malterre-Barthes (eds.): *Housing Cairo. The ~~Informal~~ Response*. Berlin: Ruby Press, pp. 252–255.

Dina Shehayeb (2009): "Advantages of Living in Informal Settlements", in: *Cairo's Informal Areas between Urban Challenges and Hidden Potentials*. Cairo: GTZ.

David Sims (2010): *Understanding Cairo. The Logic of a City out of Control*. Cairo: The American University in Cairo Press.

Dona J. Stewart (1996): "Cities in the Desert. The Egyptian New-Town Program", in: *Annals of the Association of American Geographers*, 86, 3, pp. 459–480.

Akhter U. Ahmed/Howarth Bouis/Tamar Gutner/Hans Löfgren (2002): *The Egyptian Food Subsidy System. Structure, Performance, and Options for Reform*. Washington, DC: International Food Policy Research Institute (IFPRI).